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EDITORIAL.

AVENUE LOUIS PASTEUR.

The powers that preside over the literary and scientific destinies of Harvard Medical School are evidently not in accord with the elder D'Israeli, who said, in the *Amenities of Literature*, that "the author of *Piers Plowman* disdained their exotic fancies, their Latinisms, their Gallicisms, and their Italianisms." Our inference is drawn from the fact that, quite recently, the street upon which the new group of medical buildings abuts, has been named Avenue Louis Pasteur in honor of the celebrated scientist, and in slavish imitation of French street nomenclature.

That Louis Pasteur was a beacon-light in the rather dark path of science; that medical progress to-day is indebted to him for its strength and virility; that the Pasteur Institute at Paris would be a credit to any country, are facts only the foolhardy would gainsay. But though this be truth in italics, the action on the part of Harvard University to perpetuate the name of the French scientist and to Gallicise a time-honored Anglo-Saxon expression, is so decidedly out of keeping with the spirit which should inform a representative American university, that commination ought to be meted out in no veiled terms.

Harvard University has always strained a point to preserve its entity as the best expression of American thought; it has always stood for ideals peculiar to this country, and while a certain latitudinarianism is not wanting in the conduct of its affairs, its fundamental principles have always been of the Puritanic sort: the sort which anywhere else would mean narrowness and self-concentration, but in the case of so unique and excellent an illustration of our best intellectual and moral forces, spells progress on lines that should be an object lesson to all our smaller universities. And just because we have always regarded it in the light of the best that a Puritanic conservatism can produce, our sense of the understanding of these principles stands aghast at the sudden leap its stewards have taken, from the calm content of a New England security into the turbulent water of Gallicisms and those other 'isms which should find no place in our nomenclature.

Avenue Louis Pasteur may mean much to French ears but to ours it is a foolish, Gallic perversion of a simple English phrase. Pasteur Avenue,

though plain and unadorned, is undoubtedly English with nothing objectionable to a purist, and although Paris boasts of many streets commemorative of her great men, such as Avenue Victor Hugo and Rue Gustave Courbet, this does not justify a rank imitation on the part of a representative American university which has always made for the purity of the Anglo-Saxon tongue. As well call our Washington and Lincoln Streets, Street George Washington and Street Abraham Lincoln as tolerate the Harvard Medical School misnomer.

The French word "boulevard" has done much in this country to upset the tempers of our mildest citizens. Mud roads, unadorned with trees, have been dubbed "boulevards," and to cap the climax enterprising speculators have gone a step farther, just to show how they could improve on a perverted Gallic word, by naming certain streets, Lincoln Street Boulevard and Washington Street Boulevard. With these illustrations in mind we feel that our protest will be as vain as weaving ropes of moonshine, for the history of this country teaches us that when a mandate goes forth from a university such as Harvard, the little minds are ever ready to imitate, since pre-digested food means no labor on the part of man.

PHYSICAL DETERIORATION AMONG CITY POOR.

According to Percy Stickney Grant, in an article in the North American Review, the workingman in America, and what is perhaps of more importance, the workingman's family, do not fare as sumptuously as the much exploited "full dinner-pail," of political parlance, might lead the casual observer to suppose. On the contrary, merely a glance at the mass of horrifying statistics will cause such an upheaval and revulsion of feeling in one desiring to be informed on these matters, that no trace will be left of his former self-satisfaction and blind confidence in what the future will bring forth for our nation and race.

As witness to this, let us cite the fact that of our National Guard, supposed to be a body of picked men, from twenty-five to fifty per cent were unfit for military service at the outbreak of our war with Spain. Again, that of our school children in New York, as determined by a Board of Health examination, sixty-six per cent were discovered to possess serious physical defects, and ninety-five per cent of the truant and backward children were in need of a physician's care. Furthermore, according to Robert Hunter, there are seventy thousand children who go to school daily in New York without sufficient food to nourish them. Facts of this nature might be piled up *ad infinitum*, and would prove a serious reproach, did we not discover that the same fault exists in other lands; for instance, in England, where thirty per cent. of the population in the large cities and towns are said to live below the margin of proper nourishment, and in

Edinboro, where seventy-five per cent. of the school children have physical disorders due to malnutrition.

We feel that medical men are all too apt to be Laodiceans in matters of this kind; that they are apt to look with skepticism upon the attempts made to better the condition of the poor. The physician should be the first one in the community cognizant of this fact, that either a perverse or defective nutrition during the period of growth has a positive influence toward the delay of characteristic growth, and limits the final size and robustness of development. The association that exists between malnutrition during the growing period, the employment of children as factory-workers and the deterioration evidenced by the physique of our city poor, should be clearly realized. Coupled with these potent factors, is the influence of an atmosphere filled with the pollution that arises from density of population, and the ever-present menace of infectious diseases.

Breathing parks in densely populated city districts, free baths, open air gymnasiums and play-grounds, although as yet in their incipiency as factors in physical development, are not mere dreams of the philanthropic rich, but by reason of that which has been accomplished and will be achieved later on, must be regarded by physicians as most potent influences towards an improved physical welfare. To support this contention, we will cite the demonstration made by our Navy, which draws many of its recruits from the youth of cities; youth that has lived the life of industrialism under present conditions, and as a result, is weak, pale, and emaciated. These boys, after three months out-of-door work, become bronzed, hardened, and robust, changing in so short a space of time, their entire physique and giving promise of a trend toward physical perfection.

PAUL JULIUS MOBIUS.

The unexpected death of Professor Mobius of Leipsig is announced in the German journals. Though his name is not particularly well known in this country, yet he occupied a position in contemporary psychiatry, that makes mention of him fitting in this place. Very few men have had quite the same influence that he has had. Though not a teacher nor a significant personality in University circles, as commonly understood in this country, he has managed to make his impress on medical literature in a remarkable way. Many who have enjoyed and profited by his writings appreciate the universal quality of his literary achievements and will be conscious that a wise personality has been lost to them. To those who admired and understood Mobius he represented less the accomplished neurologist or psychiatrist than that rare being, a cultured man and a cultivated scholar who wrote many things about neurology and psychiatry. The distinction is obvious to those

who would see the literature of medicine conform to the best traditions of good literary form.

One of the most significant phases of Mobius' activity was the effort he made to show the necessity of a broader interest for the psychiatrist. He insisted that the walls of an asylum should not be the limit of the psychiatrist's outlook. He emphasized the idea that a physician who desired to know something about the abnormal mind should first know something of the normal mind. He pleaded for a psychiatrist who lived among his fellow-men, shared their responsibilities, took part in their pleasures, bringing to their special work, as a consequence, that sense of proportion, that tincture of humor, and that avoidance of dogmatism which are some of the chief fruits of human fellowship.

Mobius himself was no "Asylum Man," using a term that is frequently heard as descriptive of a superintendent of an insane asylum. At the same time he concerned himself largely, at one period of his life, with the problem of asylum management, its place in the community and its service to medicine in general. The development of the insane institutions in Germany owes much to the impetus which he gave toward a more modern conception of their utility. Especially were his efforts directed toward the education of a better equipped type of psychiatrist. He believed that the psychiatrist, by virtue of his special work, should be the very highest example of a physician, because he held that the human mind represented the most important problem both from a normal and an abnormal point of view, that human activity was called upon to solve. His interest in philosophy was an ever active one. Its discipline appealed to his analytic mind as particularly fitted for those whose work was concerned with the insane. Of late years he was attracted by the evidence of pathological mental states in the lives of some of the famous men of the world; some of its musicians, poets and literary figures appealed to him as legitimate objects of research. These studies in biography are full of interest and the keen analyses of the lives so investigated form a valuable document for the student of the abnormal psychology.

A series of studies in the sexual differences of man and woman are of the utmost interest. Especially to be mentioned is the one treating of the physiological weakmindedness of women. This paper attracted great attention in Germany and went through many editions. Though its conclusions are by no means accepted yet, it forms in a certain sense a type of work of this kind representing a method of investigation which is illustrative of the man. One regrets that Mobius departed from the field of his earlier activity where his keen sense of values and his courage might have accomplished so much more.

In 1899 he wrote the following, in concluding a monograph on insane asylums. Perhaps they represent the finest ideal of a psychiatrist's activity that have been written;

"If the psychiatrist is to fulfill his whole duty he should be a stranger to no part of mental life. He should be familiar with the conditions of mental health in all its variations. As the hygienist knows or ought to know, all trade conditions and factory surroundings, and all the factors that make for healthy living, so must the psychiatrist know those of normal thinking. As a result of this attitude psychiatry will become the mistress where it is now the maid of all work. Then it will develop, as the nature of its special activity warrants. The psychiatrist will be a judge of all human things, a teacher to the jurist and the theologian and a leader among literary men and historians..

The death of Mobius makes these words particularly fitting as an index of the manner of man he was and as emphasizing that idealism has its proper place in so material a profession as that of medicine. Perhaps his chief claim to be remembered lies in the spirit that made expression of these words.

CHARLES LEVER.

That very gracious figure in literature, Charles Lever, is the recipient of fresh attention in Edmund Downey's "Charles Lever: His Life in His Letters," recently published by Wm. Blackwood & Sons. This may seem but a simple announcement, but a careful perusal of the work will show of what importance this comprehensive life is to him, whom we are pleased to call "the busy general practitioner." Charles Lever was a sorely-tried physician some years before he took up literature as a profession; but during his most arduous labors, especially at Kilrush, County Clare, when Asiatic cholera almost devastated that part of Ireland, the buoyancy of his spirits never forsook him. As his biographer says, "notwithstanding the gloom which pervaded the district, the young doctor contrived somehow to infect it with a little of his own high spirits. Physicians who worked with him through the awful time declared that wherever Lever went he won all hearts by his kindness, and kept up the spirits of the inhabitants by his cheerfulness. Some of his associates were driven to account for his wondrous exuberance, even after he had been sitting up night after night, by supposing that he was 'excited in some unknown and unnatural manner.'"

Although the whole book is the sort a physician should refer to when a fresh impetus for better work is necessary, there are parts which attract more than others, the most interesting chapter being that in which the Log-Book of a Rambler is printed. This account of his wanderings in Germany was written by Lever in 1827-30, the principal part being printed at intervals in "The Dublin Literary Gazette" during the year 1830, but given in toto for the first time in the present biography. Germany has made many strides, scientifically speaking, since then, but the social cus-

toms of to-day are not unlike what obtained in 1828. Life in Göttingen, as Lever saw it through his literary spectacles, was as crude then as it is now, and though he dwells on the barbarism of duelling and the arrogant attitude of the students to the bourgeois shop-keepers, he also notes the brighter side of student life, the brotherhood that existed; just as we, with our American tendencies, would be compelled to do to-day.

Blumenbach is described as "a small and venerable-looking old man, with a quantity of white hair floating in careless profusion upon his neck and shoulders. His head, which was almost preternaturally large, was surmounted by a green velvet cap placed a little on one side; he was grotesquely enveloped in a species of fur cloak with large sleeves, and altogether presented the most extraordinary figure I had ever seen."

These are but a few quotations to show what manner of book this is, but the medical reader cannot be laggard in his appreciation, for even our meager extracts, showing a lightness of touch, will undoubtedly prejudice him for it. We say this without hesitancy because of our knowledge of the many dreary books doctors read when their readings take them outside the realm of medicine. Modern books, too often, have the tang of psychology, psychiatry and moral pathology; they are weak reflections of that hospital life which is part of the physician's daily grind. They depress instead of buoy up; they may be life, as the literary artist seeking for the undiscovered may crave for, but to him who is innured to the real, unpoetical phases of the abnormal, they are an iterated weariness.

We cannot read all Charles Lever's novels to-day; much leisure is needed for so gigantic a performance. We make bold to state this for his works number some thirty. But even though some of us may read or have read Charles O'Malley and Harry Lorrequer and others, our profit will not be as great as a slow journey through the two volumes before us, for in the comparatively short space of 600 pages, we get a "selbst-porträt" of a lovable character; such a character as makes for the lasting success of a splendid optimism.

NAPOLÉON AS SEEN BY A PSYCHIATRIST.

Although the world is a bit weary of the many controversies that have raged around the glittering personality of Napoleon Bonaparte, complete cessation of the turmoil seems as far distant to-day as it was some twenty years ago. We have had critics, rather small than large, tell us that Napoleon lost the battle of Waterloo because of hemorrhoids preventing his sitting his horse gracefully and comfortably. Others have dwelt on his outbreaks of temper, his epileptic seizures, his uncontrollable passion for women (Masson's *Napoleon et les femmes*), his prodigious vanity (Masson's *Napoleon chez lui*), his gentleness, his probity, his honesty, his martyrdom (Lord Rosebery's *Napoleon: The Last Phase*), but it has

remained for Dr. A. N. Ellis, of Maysville, Ky., formerly assistant physician Longview Asylum, to declare, through the medium of the *Lancet-Clinic* (Cincinnati), that the Man of Destiny was "insane during the last dozen years of his life;" that is to say, directly or shortly after his interview at Tilsit, July 7th 1807, with the Emperor of Russia.

The learned doctor does not say why the change in Napoleon's character took place there and then, but states as an incontrovertible fact that it did, which certainly ought to be convincing enough to anyone acquainted only with the first principles of deductive philosophy. To quote the exact words of this remarkable contention, "a close study of his earlier years shows that he once embodied within himself many charming and lovable traits of mind and person—brave, studious, unselfish, exemplary in his private life and loyal to his duty, his family and his friends. After that meeting on the raft at Tilsit with the supreme ruler of all the Russias, at which time those two agreed to divide the world between them and from that time henceforth do just as they pleased, came dreams and hallucinations of universal empire, and then followed that complete change in his character to which I have already alluded. From one of the most polite and courteous of gentlemen, he became the most sullen, silent, crafty and morose of men. His manners became brusque, rude, overbearing, and his egotism transcendent, while at the same time his temper was so violent and capricious that no one of his courtiers could ever imagine what an hour would bring forth." Further on to support these many discreet words, the author's laxity in regard to historical facts makes him assert that "we need only speak of the wholesale murder of the 4,000 prisoners in front of Joppa, the poisoning and abandonment of his incurable plague-stricken in the hospitals of Saint Jean D'Acre, and the summary execution of the young Prince of Condé, to say that it was daily habit to do just such things, and that was all there was to it."

--We regret that we and several hundred thousands of other people are in a position to enlighten the doctor as to his grave mistakes, for history tells us that only 1,200 mortals were murdered at Joppa and, par parenthesis, they didn't count for much, being only Turks; that the poisoning and abandoning of the plague-stricken at Saint Jean D'Acre occurred in 1799 and was forced upon Napoleon by the English general after he vainly tried for sixty-one days to capture the town, and that it was not the Prince of Condé but the Duke D'Enghien who was executed in 1804. All these occurrences took place before the "complete change" which Dr. A. N. Ellis considers the dividing line between Napoleon's unselfishness and loveliness, and egotism and craftiness.

After reading the article in question carefully and remembering Lord Rosebery's well-known book, we cannot help but think that perhaps the Czar *was* responsible for changing so weak a character as Napoleon's, and only when his baneful influence was removed did Napoleon get back his former character. We read a great deal, nowadays, about the ma-

chinations of the Russians, their astuteness in diplomacy, their Janus-facedness. Perhaps the Czar, seeing he had a weakling in hand, played the Russian character to a finish, and thus metamorphosed a sweet, smiling, gracious individual into a tyrant whose sanity is now doubted by so well-known a figure in the world of psychiatry as Dr. A. N. Ellis.

Psychiatry has done much to disturb the world's equilibrium. Even now that much-abused heroine of Ibsen's *Doll House*, Nora, has been brought before the "law" in "Ibsen's Nora vor dem Strafrichter und Psychiater," Von Staatsanwalt Dr. Erich Wulffen in Dresden (Carl Marhold, Halle a. S.). We had always looked upon Nora as a spoiled child, but not so Dr. Erich Wulffen in Dresden. According to his illuminating reasoning powers, she is hysteria writ large by Ibsen. Perhaps when Dr. A. N. Ellis reads of Nora's having been brought into a criminal court, his ambition will reach out to Napoleon and the world will be edified by a new exhibition of medicine being burlesqued to serve the purpose of a daring explorer in the realms of the abnormal.

LITERARY NOTES.

On January 1st the *Therapeutic Gazette* consolidated with the *Medical Age and Medicine*. The publication will continue under the editorship of Doctors Hobart A. Hare and Edward Martin.

The first number of the British Journal of Tuberculosis, edited by Dr. T. N. Kelynack, appeared on January 1st. The contents bespeak an excellent editorship and if the future numbers reach the standard evidenced by the initial issue, a long-felt want will be filled. Among the many interesting and instructive articles are; *The Study of Tuberculosis: A Retrospect*, by Professor Clifford Allbutt; *Tuberculosis and National Efficiency*, by Sir Lauder Brunton, and *Climate as a Factor in the Treatment of Tuberculosis*, by Sir Hermann Weber.

The title of the pioneer military medical journal in the English language, the *Journal of the Association of Military Surgeons*, was changed with the January issue to the *Military Surgeon*, retaining the old name as a subsidiary title. This journal, during its six years' existence, has built up a large following, and there is no reason why its prosperity should not continue. Military medical literature is as important as any other branch of medicine, for its field is well-nigh limitless. Major James Evelyn Pilcher is still secretary and editor, and associated with him are names whose reputation in military medical circles is such that any journal bearing them could pass muster.

ORIGINAL ARTICLES.

A. CONTRIBUTION TO THE STUDY OF HYDRONEPHROSIS.

BY ARTHUR TRACY CABOT, M. D., A. M., of Boston.

Surgeon to the Massachusetts General Hospital.

Much confusion still exists in the minds of the profession as to the relations of false and true hydronephrosis. This study of personal cases is offered as a contribution towards a right understanding of these wholly distinct and different conditions which closely resemble each other clinically.

In true hydronephrosis the sac which contains the fluid is the distended pelvis of the kidney and as the internal pressure increases, the parenchyma of the kidney becomes stretched and thinned, forming sometimes no inconsiderable part of the wall of the cavity.

In false hydronephrosis the fluid is contained in a sac outside the kidney.

The site of this collection of fluid exactly corresponds to the position of a hydronephrotic kidney and may lead to a mistaken diagnosis. So close is the similarity, in size, position, consistency and mobility that no case of traumatic hydronephrosis can be accepted as an instance of true hydronephrosis unless proved by dissection in operation or autopsy.

In the Boston Medical and Surgical Journal, February 22d, 1883, I reported a case of traumatic hydronephrosis which at the time I believed to be an example of true hydronephrosis brought about by some temporary stoppage of the ureter by blood clot or otherwise, due to the trauma. I wish now to review that case and to correct the mistake made in my original report of it.

Case I.—The patient was a boy of ten who three months before had fallen down stairs and immediately after had passed bloody urine. Following this accident a tumor formed in the left renal region, was several times aspirated and a urinous fluid obtained. As it constantly refilled after aspiration an incision was made into it. The cyst wall was found immediately beneath the muscles. "The finger passed into the cavity felt" what I described in my report as "a soft nodular mass, probably the kidney, in the posterior part of the cyst." Drainage was introduced and as the boy made a quick and complete recovery no further examination of the condition was possible.

I supposed, at the time, that the sac opened was a greatly dilated renal pelvis and that the kidney was felt from the inside, as it were. This explanation never fully satisfied me, for the mass which was in the proper

location for the kidney projected into an otherwise smooth-walled globular cavity; whereas in true hydronephrosis the distended kidney forms, as I have said, a part of the wall of the cavity and the only projections from it are the flattened papillæ and the walls separating the different calices which stand out and give that portion of the sac a multilocular arrangement.

Subsequent experience has convinced me that this mass was indeed the kidney (felt from the outside) which had been ruptured by the trauma and that the cavity which I took, at the time, for a greatly dilated renal pelvis was an extra renal cavity in which the urine was confined after its escape from a rent in the renal pelvis.

False hydronephrosis of this sort was not a well recognized condition at the time of my first experience with it. Since that time it has been somewhat investigated and is now better understood.

In many cases of renal contusion or rupture a tumor is to be felt occupying the site of the kidney and extending down well towards the brim of the pelvis. This tumor is produced by an effusion of blood about the kidney. When the laceration of the kidney opens its pelvis this effusion contains urine, as well as blood.

Writing in 1901 Morris says: "The most characteristic effect of rupture into the pelvis of the kidney is extravasation of urine. This takes place principally in the neighborhood of the kidney, forming with the blood a large retroperitoneal tumor, more especially where a free passage along the ureter is interfered with; under these circumstances a large cyst may develop with a smooth inner wall containing urine mingled with detritus of blood." In another place he says: "Such a tumor, whether a hæmato-nephrosis or a circumrenal extravasation, is rounded in form and slightly movable both from side to side and in the antero-posterior direction."

It is interesting, in our endeavor to understand these cases to study the anatomical conditions which confine this effusion about the kidney and prevent it from becoming diffused in the loose cellular space behind the peritoneum.

This post-peritoneal space is so loose and readily opened up that it might be expected, if urine and blood were poured freely into it, that they would quickly spread and form a diffused extravasation. In some cases of extreme violence this occurs, but usually the effused fluids are confined about the kidney in the form of a clearly defined tumor. This limitation of the effusion cannot reasonably be explained in all cases by the formation of a limiting wall of "inflammatory formation" (Morris) for it is observed in cases where the effusion is very rapid and a circum-renal tumor is apparent within a few hours of the injury. It is inconceivable that a strong limiting wall should form by inflammatory or other action so quickly.

This limitation of the effusion must then be due to the confining action of an already existing membrane.

My observation of cases, together with careful dissections, have convinced me that the wall of the cavity in these false hydronephroses is the fibrous outer wall of the so-called fat-capsule of the kidney.

This tough capsule plays an important and beneficent part in thus confining effusions about the kidney. When the effused fluid is urine, extensive urinary infiltration is prevented; while in cases of hæmorrhage from a ruptured kidney the blood presently fills this capsule tightly and by its own internal pressure brings the bleeding to a standstill.

The subsequent history of one of these cases will vary according as the effusion contains urine or not.

If the effusion consists of blood alone it will usually disappear by absorption. When absorption is slow, aspiration of the serous part of the hæmatoma may hasten its disappearance.

When the effusion contains urine it may form a false hydronephrosis such as I described above. Such a false hydronephrosis in which the fluid is mainly urine if not cured by one or two aspirations, as has not infrequently occurred, may be confidently expected to yield to a simple incision with drainage.

A mixed effusion of blood and urine may lead to suppuration and is pretty certain to do so if any inflammation exists in the kidney or its pelvis at the time of the accident.

In a healthy patient such a mixture of blood and urine may, however, disappear and cure itself.

The following case illustrates this condition:

Case II.—A young man while playing football was thrown against a wooden bench and suffered a severe contusion of the right loin. This was followed by hæmaturia and a tumor presently appeared in the right side which simulated a greatly enlarged kidney. It was elastic and somewhat tender to palpation.

I saw the patient in consultation with Dr. Chas. E. Abbott, of Andover, Mass., on about the third day after the accident. There was now an indistinct sense of fluctuation in the tumor. I introduced an aspirating needle and drew off seven or eight ounces of a watery fluid, dark purplish red in color. This did not reduce the size of the tumor materially, but it made it soft and flaccid. Aspiration was stopped by the plugging of the needle with old blood clot.

An examination of this fluid on the following day showed it to contain abundant urea, and to be evidently a mixture of urine and blood.

Supposing, at that time, that such an effusion of urine must necessarily lead to suppuration, I expected to receive a summons within a few days to open and drain the sac, but contrary to expectation the tumor steadily decreased in size and finally disappeared.

It is questionable whether this disappearance of the effusion is due entirely to absorption or whether drainage through the rent in the renal pelvis plays an important part in its removal.

Passing from this false hydronephrosis to true hydronephrosis I have an interesting observation to report in which both conditions, the false and the true co-existed in connection with one kidney.

Case III.—J. S. W. Jr., a well developed boy of 11 years, was seen by me March 20th, 1897, in consultation with Dr. E. H. Stevens, of Cambridge. His history was as follows:

Since the age of one and a half years he had had repeated attacks of severe abdominal pain. At first these came every week and lasted several hours. Gradually they became less frequent but were of longer duration. Presently it was noticed that a fullness appeared in the left loin with each attack and disappeared as the pain subsided. These attacks were usually accompanied by vomiting and by high fever.

The last previous attack was seven months ago and lasted about two weeks. Two weeks before I saw him he began to have pain in the left side and presently a tumor in that side was noticed. The pain was of moderate severity until four days ago, but since then it has been very severe. Two days ago Dr. Stevens aspirated the tumor and drew off eighteen ounces of fluid of specific gravity 1006 and containing urea.

The tumor rapidly refilled and when I saw the patient it was as tense as ever and the boy was suffering great pain. It extended well up under the ribs and downwards to the brim of the pelvis.

Operation was advised, and under ether we opened the tumor widely in the lumbar region. A large quantity (not measured) of bloody fluid escaped and it was then seen that the fluid was contained in a sac the wall of which seemed to be the outer layer of the fat-capsule; and at the bottom of this sac lay a collapsed hydronephrotic kidney with a rent in its wall three-quarters of an inch in length, which opened the kidney through the thin wall of one of the calices. This opening was enlarged and the finger, introduced, showed the whole kidney to be reduced to a thin walled sac with numerous irregular pockets.

An examination, as careful as could be made with a rather poor light, failed to show which pocket represented the pelvis and the ureter could not be made out.

The kidney was drawn up and sutured to the lumbar fasciæ in the hope of thus straightening the ureter, and the rent in the kidney was closed by a continuous cat gut suture.

For two days the boy was comfortable and then he began to have severe pain in the side and the swelling was found to have returned to almost the same size as before operation.

It was found that the tumor now was the greatly distended hydro-

nephrotic kidney, which had filled up tensely since the rent in its wall had been closed.

It presently became necessary to puncture the kidney and put in drainage. The wound soon healed down to the tube and with a bottle attached to a swathe to collect the urine he kept pretty comfortable for two years.

In March, 1899, he entered the Massachusetts General Hospital to have an operation for closure of the fistula. At this time he had about 3xxx of urine each day from the bladder and 3xx from the opening into the kidney.

The urine coming from the renal fistula was of very low specific gravity while that from the bladder was normal in character.

A nephrectomy was now done. When the ureter was reached it was found that just after leaving the pelvis it was looped over a little artery which ran direct from the aorta to the lower part of the kidney.

The wall of the ureter was very thin at the bend where it was caught up over this vessel and the calibre was so narrowed that the finest probe would not pass.

The operation was successfully completed, although the separation of the sac was difficult on account of firm adhesions.

The boy made a good recovery and has been perfectly well ever since.

This was properly a case of congenital hydronephrosis. Although the dilatation of the kidney did not make itself noticed until some years after birth, the condition that led to it was a congenital one.

It is an interesting speculation whether it was the assumption of the upright posture which, causing a downward sag in the kidney, tightened the loop of the ureter over the artery and caused an obstruction which had not shown itself during the horizontal life of the child.

Besides the last case in which a congenital obstruction of the ureter by looping over a vessel caused the hydronephrosis, I have seen one case of congenital hydronephrosis in which the obstruction seemed to be a valvular one at the junction of the ureter with the renal pelvis.

Case IV.—A poorly developed boy of four had had a swelling in the left lumbar region since birth. One month previously this tumor had been aspirated and urine had been obtained. It rapidly refilled again and the day before I saw the child he had suffered from pain in the abdomen followed by vomiting. The child was pale and anemic, with quick pulse and respiration rapid and superficial. The temperature had been considerably raised for some time.

When I saw him the abdomen was distended by a tumor which lying mostly to the left of the median line, extended out and filled the flank, reached well across the middle line, up under the ribs and down over the pelvis.

Fluctuation by wave was distinct over this tumor and its character,

its position and the previous aspiration of a urinous fluid from it made the diagnosis of hydronephrosis sure.

It was felt that the child was rapidly failing and that immediate interference was demanded. He was not strong enough for an extensive operation, consequently a nephrotomy was quickly done and drainage established.

In opening down to the sac a cavity was opened containing several ounces of chocolate colored fluid.

It was thought that this was due to leakage from the puncture made with the aspirating needle.

The sac was then opened and a large quantity of a similar chocolate colored fluid was evacuated. The interior of the cavity presented the sacculated appearance of a hydronephrotic sac in which no traces of the kidney could be made out at the time. Drainage tubes were introduced.

The child was much relieved by this operation and made a slow recovery.

A month and a half later the temperature which had remained irregular and somewhat raised since the operation fell to normal. The child seeming now in good condition, a nephrectomy was done and the hydronephrosis was enucleated and removed. The sac was quite adherent and the peritoneum was opened during the operation.

It was closed by a continuous cat gut suture and in no way complicated the result. The boy made a good recovery. The sac presented nothing peculiar. The upper end of the ureter made a nipple-shaped projection into the pelvis in such a way that it was quite clear it must have acted in a valvular manner to close the exit. The ureter was otherwise normal in size with no dilatations.

This case afforded a good illustration of the occasional benefit of a nephrotomy as preliminary to a nephrectomy.

Acquired Hydronephrosis.—The cases of hydronephrosis that I have met with have all of them resulted apparently from mobility of the kidney. I refer here to the cases of unilateral hydronephrosis appearing long after infancy, and I exclude many cases of distention of the kidney in which the contained fluid has been purulent, also those in which both kidneys have been distended owing to obstruction in the lower urinary passages.

In a number of the cases that I have seen the distention of the kidney has been only moderate in degree and has disappeared under the influence of posture with raised hips and lowered shoulders. I have also seen manipulation greatly assist in the reduction of a kidney distended in this manner.

I have had two cases in which operation has brought about a cure of hydronephroses of considerable size in kidneys which showed mobility.

In neither of them could a distinct valve formation such as Fenger has described, be made out. The ureter was, in each case, found to be tortuous just below its emergence from the pelvis and the obstruction seemed to be due to a folding of it upon itself.

There was nothing to indicate which particular twist of the ureter had been the seat of the obstructive pressure. It is easy to see that an obstruction of this sort may act intermittently until the enlargement of the kidney is sufficient to cause a firm pressure against the kink and make the obstruction a permanent one.

In one of these cases intermittent attacks had been a marked feature. In the other, although the mobility of the kidney was very great, no history of intermittent pain or tumor could be obtained.

The point of especial interest in the two cases of this sort upon which I have operated is that the simple measure I adopted for straightening the ureter seems to have been efficient in restoring the permeability of the canal so that no subsequent filling up of the kidney occurred.

This measure was to insert a bougie through the ureter down beyond the portion that was tortuous.

In this way the various curves of the canal are effaced while the pelvis is contracting and pulling it into shape. Furthermore, and this is I believe most important, "a moderate amount of inflammation is set up in the walls of the ureter, which stiffens them, and attaches them to the parts about and thus tends to keep the form given to the tube." This explanation of the manner in which the bougie may accomplish the permanent correction of the obstructing condition, was first given by me in an account of my first case reported to the Surgical Section of the Suffolk District Medical Society in January, 1896.

This case was seen seven months later and at that time there was no sign of any refilling of the sac, showing that the potency of the ureter had been satisfactorily restored.

The second case only confirmed the good opinion I then formed; for the result has been most satisfactory and there is no sign of recurrence at the end of one and a half years.

I append to this article a brief report of these two cases. In both cases the kidney was fastened in the loin by stitches attaching it to the rib and the fascia.

The end of the bougie was brought out through the opening left for drainage, and it was removed at the end of three days. It was my intention in the second case to have kept it longer, but the bougie was so acted on by the urine that its surface showed a tendency to scale off and on this account it was removed earlier than had been intended.

This method of treatment is not presented as a substitute for plastic operations upon valves, for these have demonstrated their value in cases

of oblique implantations of the ureter upon the side of the pelvis and also in cases of nipple-like projection of the upper end of the ureter into the pelvis such as was found as a congenital condition in Case IV.

The use of the bougie, however, as I have described it, is of value in those cases where the seat of obstruction cannot be determined, owing to the multiplicity of twists in the ureter and the impossibility of telling at which bend the closure of the canal occurred.

Miss A., 32 years of age.—A thin, pale woman. Two years before she had first noticed an enlargement of the abdomen, a little to the right of the median line, and in the past year had suffered considerably from abdominal pain, which had been almost constant and was noticed more for a week following catamenia. She had never noticed any symptoms in connection with urination.

Examination of the abdomen showed a large, fluctuating mass, which when lying on her back, lay on the right side, extending up well under the liver and extending down to the brim of the pelvis. When she stood up this mass rested across the lower part of the abdomen, just above the pelvis, and the region about the neighborhood of the liver was then empty.

The catamenial history led to the diagnosis of ovarian cyst, but the position of the tumor when she was on her back, strongly suggested a hydronephrotic kidney. Examination of the urine was wholly negative. The great mobility of the tumor made it seem probable that if it were the kidney it had a long meso-nephron, and there was danger that a puncture in the loin might traverse the peritoneal cavity. We therefore thought it wiser to explore by an abdominal incision, which was done March 29th, 1895.

The tumor was found to be a large hydronephrotic kidney, which was extremely movable as had appeared by previous examination. With the hand in the abdomen guiding the aspiration, a needle was introduced through the loin and the sac entirely emptied. The abdominal wound was then closed. This operation was followed by no reaction, and the patient made a good recovery.

The examination of the fluid drawn gave the following result: It was of a pale, amber color, with a specific gravity of 1.007, and having a slight trace of albumin. The sediment consisted of brown, granular cells with occasional granular and fibrinous cylinders, like renal casts. The examination for urea showed that the fluid contained 1.01 per cent.

For at least a fortnight there was no sign of any refilling of the cyst, but at the end of that time the tumor began to be noticeable in the loin. Examination of the urine soon after the operation gave a specific gravity of 1.020, a slight trace of albumin. In the sediment hyaline and granular casts, with fat adherent.

The patient was in a rather feeble condition during her convalescence, with edema of the ankles, which postponed further operative treatment. On May 7th, her condition being then pretty good, the kidney was opened in the loin, and after it was emptied the ureter could be seen emerging from the cyst by a funnel-shaped opening and running a tortuous course downward towards the pelvis. There was no valvular appearance to the opening of the ureter, nor any condition which could be corrected by incision or other alteration of that orifice.

The mechanical condition which had led to the hydronephrosis appeared to be a twisting of the ureter at some point in its tortuous course, that point not being determinable after the sac was emptied and the parts were lax. It being desirable, therefore, to efface, as far as possible, all of these abnormal twists and turns in the ureter, a gum-elastic bougie, about No. 6, French, was introduced and carried with some difficulty down through the ureter until it reached the neighborhood of the bladder. The sac was sewed to the edges of the wound through the muscles with continuous catgut. A drainage-tube was then introduced into the pelvis of the kidney, and the bougie was left in situ.

The recovery was rather slow, but, as far as the healing of the wound went, was uneventful. The bougie was removed at the end of three-and-a-half days, and the drainage-tube was out in nineteen days.

This patient was seen seven months later and, although there had been at times some discomfort in the abdomen, there was no sign of any filling up of the kidney.

Mrs. B., 54 years of age, was brought to me in May, 1905, by Dr. G. C. Smith, of Boston.

The patient gave a history of pelvic and low abdominal pain intermittently during middle life. This had ceased five years previously, at the time of the menopause.

For some (uncertain number) years has had attacks of pain in epigastrium accompanied by nausea and vomiting, with some chilly sensations. In the past year these attacks have come more frequently (once in five weeks), but have been somewhat less severe than formerly.

There is, at times, some sense of discomfort in the right side and down the leg.

There has been no noticed disturbance of urination nor have there been any symptoms referable to the bowels.

Examination of the patient showed an elastic mass in the right side of the abdomen close below the liver. This mass was pushed downward by inspiration and could then be held down by the fingers thrust in above it so that it did not rise on expiration, but left a space between it and the liver.

The diagnosis of hydronephrosis was made and an operation advised. This was done on June 15th, 1905.

A lumbar incision was made along Israel's line and on reaching the kidney it was seen that the pelvis was greatly distended with the body of the kidney above it.

A trocar drew over a pint of pale, clear urine. The sac was then incised and the opening into the ureter was found. No valvular condition was found and a urethral bougie about No. 12 French size was passed down to the bladder without encountering any resistance.

This bougie was left in situ, a drainage tube was placed in the sac, alongside of it, and the opening was closed down about them with a continuous cat gut suture.

The kidney was then fastened to the fascia and to the lower rib with Pagenstecher sutures placed after Guyon's method.

The patient made a good recovery, the bougie being removed from the ureter on the third day.

A comparative examination of the urines during convalescence was of some interest as indication of the functional activity of the hydronephrotic kidney.

The urine drawn from the sac at operation showed a specific gravity of 1006, no albumin, and a rare granular cast.

Two days later the specific gravity of the urine from the nephrotomy tube had risen to 1012, while the urine from the bladder had specific gravity of 1019. Three days later they were, from nephrotomy, 1009, from bladder, 1011. Four days later, from nephrotomy, 1008, from bladder, 1010.

The quantity of urine from the hydronephrotic kidney was very nearly the same as from the other, showing that its functional activity was but little impaired.

The patient made a good recovery. One year later she wrote me that she had had since the operation four attacks of epigastric pain similar to those before. She said, however, that the tumor in the side had not reappeared in connection with these attacks. She expressed herself as feeling well and said that she had gained twenty pounds in weight during the year.

This patient was seen eighteen months after operation. She had at this time been more than six months free from any discomfort whatever. There was no sign of any enlargement of the kidney and she weighed thirty pounds more than at the time of operation.

PSYCHOTHERAPY.

BY M. A. BLISS, M. D., St. Louis.

Since the beginning of time the influence of the mind over the body has been recognized and utilized in the cure of both bodily and mental disease. Within very recent years the subject has been studied with extreme care by some of the foremost students of the time, and there is now in course of development a systemized and exact method of the application of this powerful means of help to many sufferers.

Within very recent time Dubois of Berne has, perhaps, written most fully and helpfully, as well as optimistically, on this subject. Oppenheim's "Psycho-Therapeutische Briefe" have thrown additional light and suggested, perhaps, a useful system more adapted to the needs of those of us less skilled in the art.

We are all so familiar with the influence of the personality of certain physicians that it would be a trite and commonplace recital to multiply instances. An illustration was afforded me recently when a young lady in speaking of her physician, a successful internist, exclaimed ecstatically, "why, when he shakes hands with you, you are half way cured."

Psycho-therapeutics, in its present development, contemplates a different method from the ordinary "jolly" so freely dispensed by the "medicine man," and which falls into some shadows because of its free use by unscrupulous quacks and charlatans as well as by very misguided, if earnest and well meaning scientist healers, etc. It bases its efficacy on a re-education of the reason after a full examination has disclosed as nearly as possible the exact state of the patient physically and mentally, and must be differentiated from our usual conception of suggestion in that we carefully eliminate any mystery or means, the nature of which the patient cannot comprehend. Even the prescription, which is the thing the patient thinks of greatest importance, is most frequently omitted.

It should be kept in mind that psycho-therapy finds its largest application in the psycho-neuroses; that it contemplates exact and complete physical examination and, if possible, diagnosis; that the well known remedies of the pharmacopea are not discarded when there is a clear indication for their use, and the same is true of such surgical procedures as may be necessary. Its claim to attention in its present development is that we shall not leave what help may be derived from it to the accidental remarks of the more or less kind-hearted physician who seeks to alleviate obvious mental distress by comforting assurances, though immense good has been done in this way, but by a clear and constant recognition of its power to synergize all other means and sometimes to cure in spite of them. It is a method which can be used to more or less advantage under any environ-

ment, but it is often necessary, on account of the home surroundings of the patient, to carry out the plan in the way suggested by Weir Mitchell—with a rest cure, then all unfavorable influences may be checked.

To explain to the patient the mechanism of the plan it is my custom to call attention to a series of physiological effects of the emotions. The blushing which comes from pleasure or embarrassment, the paleness of fear, the activity of the salivary glands under the influence of anticipated gastro-nomic indulgence, the dryness of the mouth of the embarrassed speaker. One may elaborate in this way until the interest in physiological processes is aroused and it becomes apparent how the function of nearly every organ is modified by the nature of the stream of thought. Beaumont's observations on the stomach of St. Martin, especially that the thought of certain foods welcome to his palate aroused the flow of the juices of the stomach, shows how the nutrition can be helped or hindered in its very portal into the body. A clear word picture of one under the influence of courage, hope and confidence, the bright eyes, warm surface, moist mouth, the muscular activity, contrasted with the cold surface, dull expression and sluggishness of fear, despair, grief and hopelessness, brings one to a realization that it does not matter whether there is a valid reason for these emotions or not their influence on the functions is the same. And does it not frequently happen that one picture may be transformed into the other by a sudden turn of fate? It is frequently the very small things of life which bring about these emotions in those unstable unfortunates who may be listed among the psychoneurotics. But when we reflect upon it we find that we are all subject to some exaggeration in our reaction to the pin pricks of life.

That we all must learn a stoicism which protects us like an armor, is apparent whether it has come unconsciously or by steady effort. As the Spartans taught their children to endure physical pain that they might bear the wounds received in battles to be fought in later life with stoical bravery, so must the physician teach his patient to endure with equanimity the pain which is of mental origin and which is so largely modified and often removed by explanations dispelling fear. And it is well, too, if we may begin as the Spartans, with the children, for who has not seen the seeds of future nervousness sown and cultivated by the over solicitous and indulgent parents of children whose heredity may have handicapped them, but in whom a robust view of life is possible of cultivation by proper moral training.

We call attention to the expenditure of force made through the various emotions, which the patient dimly realizes and we plead for the application of this force to some useful end. The beneficial effect of a "work cure" is from applying less force to the work than to the worry it displaces, thereby creating a reserve.

A long and friendly conference will often disclose the leaks which are draining the strength and vitality of the patient and the attention called to them together with an explanation of how tissues are used up and repaired will accomplish a step toward correction. Oppenheim reinforces and multiplies the effect of a personal conversation by means of what he calls psycho-therapeutic letters. These are written for patients who are visiting him daily as well as for those whom he sees less frequently, or may be departing from his care. It may be well to quote one and then to comment on its features.

"MY DEAR GENERAL:

"I believe it will be advantageous to you to explain further by letter the subject of our conversation of yesterday, especially so, since I could see from the expression on your face, that you went away scarcely convinced.

"A prominent physician, one for whom I have the highest regard, has asserted that all of your symptoms, and especially the vertigo, depends upon a calcareous deposit in your arteries.

"You, my dear general, have seen in this statement your death warrant, since it explains all the sufferings and fears which torture you. After the most careful examination I can say to you with the fullest conviction, that your fears are groundless.

"You yourself are so well versed in science, that I feel I can discuss the question with you as I would with a colleague. The fact is well known that under the present condition, that is, when a man of your age complains of vertigo, one must think first of all of calcification of the arteries as a cause for it, because it forms the usual senile change and vertigo is the most common symptom. But, leaving aside the fact, that the vertigo of arterial disease is often a temporary thing and in no sense always a serious symptom it is very wrong to interpret the symptom, appearing in old age without further question and without further proof, as a direct result of arterial calcification. This sort of thing is in my opinion too often done and frequently to the disadvantage of the patient. First of all it is necessary to study and to analyze the symptoms carefully. I will not here go into the question of the many different forms of vertigo nor of their manifold origin, but confine myself to your own case.

"Two years ago, following overloading of the stomach, you had a real attack of vertigo, which was repeated many times during the day, until through vomiting and purging, the contents of the stomach were gotten rid of. Since that time, the fear of vertigo has taken hold of you. It is not a rare thing nor a new thing in my experience, to see a man, who has shown his fearlessness and indifference to death, in countless battles, a hero in fact, in the face of fear of a disease, act contrary to his whole character.

"The remembrance of that attack of vertigo is so vivid in your mind, that the idea alone is sufficient to arouse in you the symptom, or at least so similar a phenomenon that it approaches very closely the original. That this explanation is correct is shown clearly by analyzing the symptom. You confess that at home you have positively no vertigo at all; as soon as you leave the house, especially when you are alone on the street, far from home, the memory of the attack of vertigo makes you so anxious that you have a feeling of weakness and dizziness, consequently you are compelled to struggle to hold yourself firm. Thus the hero von X. sits at home in his easy chair like a frightened woman, and embitters himself and his surroundings. Even if I found in your case evidence of arterial calcification, I would be in doubt whether it was the cause of your vertigo, or whether it was not a memory vertigo, an anxiety vertigo. I can assure you that change in your arteries is not more than is consistent with your years, and that your heart and arterial system can reach old age free from symptoms. Now, you must brace up. I will call for you myself in the morning to go walking and I am sure that in a few weeks you will walk about free from vertigo. (This happened.)

To a patient with tabes he wrote:

"Since you have already learned it from other sources, I cannot hide from you that you show the early symptoms of a spinal cord disease. This statement of mine does not by any means indicate, as you have feared, that it is the beginning of the end. You have no reason to despair. We physicians are proud of the fact, and believe it to be an indication of the progress of medicine, that we are able to diagnose disease of this kind in its very earliest stage. This means a great advantage to the patient, because a conscientious and well informed physician, basing his methods on this knowledge can so regulate his patient's life and can make use of such therapeutic measures, that the progress of the disease, at least, can be arrested or the development of the disease can be delayed. These measures can and should be advanced without the patient being aware of the disease that has attacked him. Because the idea of the nature of this disease, prevalent among the laity, and for that matter among doctors of the old school, arose from the picture of the advanced and well developed cases and it was only in such advanced stages that the disease has been heretofore recognized, when the symptoms were so prominent that they would impress even those who knew nothing about it. This sad picture is rendered even more tragic by all the hopelessness and helplessness with which the lay imagination has surrounded the idea of spinal cord disease.

"We neurologists, however, know that this disease very often runs a mild course; that a man, who to-day presents certain early symptoms of this disease can be active and enjoy life for 10 to 25 years. For a man,

say 30 to 40 years, this gives a normal period of activity. What disturbance of happiness; what a sad outlook for the future 'would the knowledge of the possession of this disease bring if it were not known that there is a form in which the progress is slow and the disease itself benign in character.

"In such cases the victim of disease, experiences impressions, worry and fear, expecting every day a new symptom or an increase in the severity of existing symptoms; in such a state of mind he lives out his life. I have often observed with this very anxious and expectant state of excitement comes a condition of nervousness and a state of depression, which in their seriousness are of much greater importance than the cord disease which cause them. From this I beg to warn you. This course I would strongly impress upon you. Do not look upon yourself as one who is lost; as one who has become the victim of a progressive and incurable disease; as one who will be early paralyzed. I can give you from my own experience the assurance that your physical condition in 10 years need not be different from what it is now. Just as positively must I say that you make use of all the preventive measures which I have to give you, that you must give up all such unusual exertion and pleasure which only one in the most vigorous state of health dare undertake.

"I counsel you first of all, that once a year you undergo an examination at the hands of a physician who is expert in such matters. With best exceptions you should conduct as a normal individual and you should think of yourself as such, remaining true to your profession and not withdrawing from the pleasures of social intercourse.

"With the hope that my advice will be as valuable to you as it has been to many others who have your trouble."

He has determined by intimate conversations the patient's weak points, and he sets about quite calmly and deliberately to give an antidote to fear, to stir up pride, courage and endurance, to dissipate false beliefs, to explain away the exaggerations of possibly trifling disorders. The patient may read the letter once or twenty times a day, each time gaining periods of placidness which, even if of short duration, allow the nutritive functions to gain a little headway. The letter method of continuing a helpful relationship between physician and patient when separated by distance, has perhaps always been used, but this plan does not consider distance and its efficacy is great in proportion to the skill with which the letters are prepared. I find such letters require a great deal of thoughtful care. It has often happened that my patient has hastened a reply, pleading for explanation of some statement I let creep in which gave alarm, or they had read a sinister meaning "between the lines." It is well to read over one's efforts several times, making necessary corrections, for it must be remembered that these letters are intended to be indelibly imprinted on the patient's mind.

We do not work long in this field before discovering its great difficulties. Mastery of the art requires many of the factors required to master any of the arts—original capacity, a fondness for the pursuit, an inexhaustible optimism, an untiring determination to succeed. One may not hope, unless he be one of the accidents of nature—a genius—to be a successful psychotherapist without cultivation, with any greater chance of success than he would meet in an attempt to play a difficult musical instrument or paint an acceptable picture. Successful work cannot be done while watching the clock. Time must, in a great measure, be forgotten. The physician himself should strive to stand as an example of the beneficent influence of the principles he attempts to teach.

Impatience and irritability have no place in this work. Mistakes are easily made and one must ever be on the alert to avoid them. We must many times be content to modify the mentality to a degree compatible with ordinary family existence, and success here, though partial, should be accepted thankfully. Absolute specifics are rare in the healing art.

How often does it happen that we fall short of ideal results in the application of any of the measures well known in medicine and surgery? Modern psychotherapy lays no claim to be a panacea, though its influence can be verified in widely varying conditions. Though only in process of development it furnishes a means of palliation, or of cure, for certain very painful and frequent disorders and is a valuable addition to our list of potent remedies. How potent will largely depend on the skill, the patience, the perseverance, the courage and the optimism of the doctor.

Mrs. S., 36—2 children, wife of teamster, lived in a tenement on North Market Street. For months she had a recurring sense of oppression in the precordial region. She called a physician, who examined her heart and left her with the impression that it was much impaired. Finally she remained in bed and fearing that even the utterance of a word would bring immediate disaster, remained dumb. For six months she was in bed and did not speak one word, indicating her wants by signs with the right hand. A table at the bedside was covered with bottles and boxes of medicine. Her husband did the housework after his own fashion with the aid of two small children who badly needed a mother's care.

Examination disclosed no heart lesion. Glove and stocking anesthesia generally increased deep reflexes, no abnormal reflexes. Anxiety was marked. After careful examination she was assured the heart was not diseased. That she could speak without danger. After a quarter of an hour she was induced to say one word, "No." A spasmodic movement of the left chest took place. Later she was induced to say "Yes," when less movement occurred. She was seen again in a week and the nature of her trouble explained carefully and at length. She then got up, gradually returned to her ordinary duties and has since remained well, a period of

six or eight months. She was seen four or five times at intervals of a week and each time assured of her safety. No medicine was given.

C., age about 45, single.—Recurrent attacks of vomiting which at first arose apparently from fatigue or some emotional cause, but which became so frequent that she was greatly emaciated and very weak. A diagnosis of stenosis of pylorus was made and a gastro-enterostomy was done. Improvement occurred, but in a few months the same state returned. Another gastro-enterostomy was done. Another period of improvement was followed by a recurrence of all the old symptoms. She would be stretched out on her bed vomiting everything, and quite resigned to die. She would declare there must be a cancer of the intestine and would picture the inflammation vividly. It repeatedly happened that a strong assurance that there was no cancer, nor any inflammation, resulted in having her up again in a few days, retaining food and gaining strength and attending her duties. The attacks have lessened in frequency and are now of rare occurrence and always manageable by what may be called a pure psychotherapy.

"RESURRECTION DAYS."*

By MORTIMER FRANK, M. D., B. S., Chicago, Ill.

Mr. Chairman and Members of the St. Louis Medical History Club: I appreciate very highly the privilege and honor of being invited to address you this evening, and trust that the subject I have chosen will prove as interesting to you as it has to me.

The thrilling times known as "Resurrection Days" marked the difficult progress of the study of anatomy in England and Scotland, but after the passage of the Warburton Anatomy Act in 1832, bodies ceased to be scarce and body-snatching, which was systematically engaged in, was gradually abandoned. Previously the only recognized legal supply of subjects for dissection was what the gallows provided.

In 1540 a law was enacted in England allowing the Company of Barbers and Surgeons to have yearly the bodies of four criminals to dissect, and so the teaching of anatomy in England was jealously guarded by that corporate body for over one hundred and seventy-five years. Private anatomies were forbidden by the company, and as late as 1714 William Cheselden was reprimanded for holding anatomical demonstrations in his own home, these having been introduced by Brissiere, a French refugee and a surgeon of renown during Queen Anne's reign. Soon after this date, however, we find private schools of anatomy being established in London.

*Read by invitation before the St. Louis Medical History Club, Sept. 27, 1906.

With the rise and competition of the several anatomical schools, the difficulty of obtaining adequate material increased. The absolute necessity of having a good supply of bodies for the use of students, so as to prevent them from going to rival schools, caused high prices to be paid and made it worth while for a certain class of men to devote themselves to this nefarious traffic. Professional body-snatchers were human ghouls, thieves of the lowest grade and the most desperate and abandoned class of the community, who robbed the dead for gain. Their work was well paid, but perilous to life, on account of public hatred, and a more depraved class of men did not exist. The men usually worked in gangs and competition was keen amongst them. They would do anything to spoil the success of their opponents. The "resurrection-man" was in a position to do much harm, and he had many ways of doing it. If any independence was shown by the teachers and the demands of the gang refused, victory usually fell to their lot. If a body was brought to the dissecting room by anyone outside of their number, they would break into the room and mutilate the cadaver in such a manner as to make it useless for dissecting purposes. If this could not be done, the police were notified that a certain dissecting room contained a stolen body. Joshua Brookes, who had incurred the displeasure of these men, was a victim. At one time, because he refused a *douceur* at the beginning of the session, he awoke one morning to find two badly decomposed bodies close to his school. Two young ladies stumbled over one of them and complained to the police, and public indignation ran high against him for a time. On another occasion a body was brought to him in a sack and paid for at once. Soon after, upon investigation, the subject was found to be alive, and in all probability introduced into the house for purposes of burglary. Not only were the "resurrection-men" not satisfied with a *douceur*, but at the end of the session demanded "finishing-money."

For a time these men of ill-fame reigned supreme, exacting almost any price they chose to ask. If any demur was made, they stopped the supplies, and then the medical students became angry, held indignation meetings, sent deputations to their teachers, sometimes asserting that their lectures were not as active or as liberal as those of some rival school, and threatening to leave *en masse*. Thus the lecturers were in a manner forced to pay more for their subjects than they could receive from their pupils for dissecting them. The expenses, moreover, did not end here, for when the regular "resurrection-men" got into trouble, the surgeons had to make great exertions in their behalf, and often advanced large sums to defend them, or to keep them and their families during imprisonment. The teachers formed themselves for a time into an anatomical club for their own protection, but their agreements were not faithfully kept, and so with new schools springing up and compe-

tition keener, the teachers were as much as ever in the hands of the "resurrection-men." In London, under the leadership of Sir Astley Cooper, the violation of graves had become a horrible trade. For the defence of these men Cooper spent hundreds of pounds. One of his accounts includes fourteen pounds, seven shillings, for half the expenses of going down and bailing Vaughan at Yarmouth, thirteen pounds for Vaughan's support during twenty-six weeks' imprisonment, six shillings to Vaughan's wife, forty pounds and eight shillings for four subjects, paid to Murphy, and six guineas "finishing money" to three men at the end of the session.

The high prices paid led some people to offer their bodies before death, and Sir Astley's brief answer to one offer from a third party



FIG. 1.—Surgeons' Hall, Lincoln Inn Fields, from a print published in 1817. Here the bodies of Bishop and Williams were taken after execution at Newgate.

asking to know the truth, is preserved amongst his papers at the Royal College of Surgeons of England. The letter in question was: "Sir—I have been informed you are in the habit of purchasing bodys and allowing the person a sum weekly; knowing a poor woman that is desirous of doing so, I have taken the liberty of calling to know the truth. I remain, Your humble servant."

On the back Sir Astley wrote: "The truth is that you deserve to be hanged for such an unfeeling offer.—A. C." But under other circumstances, when the obtaining of the corpse of a person who had died of an operation, interesting to the surgeon, was in question, Sir Astley paid large sums. Thus his accounts for 1820 show the following entries in regard to obtaining the body of a man on whom he had oper-

ated twenty-four years before: "Coach for two there and back, £3, 12s.; guards and coachmen, 6s.; expenses for two days, £1, 14s., 6d.; carriage of subject and porter, 12s., 6d.; subject, £7, 7s.; total, £13, 12s."

This body was to be obtained, we read, "cost what it may." It is no wonder, then, that of Sir Astley it might be said, that no man knew of so much of the habits, the crimes, and the few good qualities of the "resurrection-men." He could obtain any subjects he pleased, however



FIG. 2.—Barber Surgeons' Hall from an old print published in 1828, where the bodies of executed criminals were legally brought for dissection.

guarded, and indeed offered to do so. No one could go farther than he did before a committee of the House of Commons, to whom he plainly avowed: "There is no person, let his situation in life be what it may, whom, if I were disposed to dissect, I could not obtain. The law only enhances the price, and does not prevent the exhumation."

It must not be supposed that all the bodies which were supplied to the schools were disinterred. Many of them were stolen or procured by false pretenses before burial, and that some bodies were obtained by

murder there can be no doubt. The exposure caused by the trials of Burke and Hare in Edinburgh, and Bishop and Williams in London, substantiates this. The ranks of the “resurrection-men” were largely recruited from the custodians of cemeteries who had lost their positions. The slightest vigilance on their part would have made it impossible for the “resurrection-men” to have spent the time necessary for their labor without detection. The work was not done entirely by men, for several of the tricks used could more properly be carried out by women. Spring guns were set in many of the cemeteries to prevent the depredations of the “resurrection-men,” but were often rendered harmless. If a certain grave was to be robbed in the evening, the sorrowing mother or bereaved widow would walk around the newly-made grave late in the afternoon and manage to detach the wire from the guns. Mort-safes or strong iron guards were sometimes placed over the grave, and in some cases iron coffins were used. The undertaker often arranged that the coffin fastenings were of an easy kind. Newspapers of the day contained advertisements of patent coffins, and Southey in his ballad, “The Surgeon’s Warning,” represents the fear of a dying surgeon buried in one of these, lest his apprentices should serve him after death as he had served others during his life.

* * * * *

All kinds of carcasses I have cut up,
And the judgment now must be!
But, brothers, I took care of you,
So pray take care of me!

I have made candles of infants’ fat,
The sextons have been my slaves,
I have bottled babes unborn, and dried
Hearts and livers from rifled graves.

And my ’prentices will surely come,
And carve me bone from bone,
And I, who have rifled the dead man’s grave,
Shall never rest in my own.

Bury me in lead when I am dead,
My brethren, I entreat,
And see the coffin weigh’d, I beg,
Lest the plumber should be a cheat.

And let it be solder’d closely down,
Strong as strong can be, I implore,
And put it in a patent coffin,
That I may rise no more,

If they carry me off in the patent coffin,
 Their labour will be in vain;
 Let the undertaker see it bought of the maker,
 Who lives in St. Martin's lane.

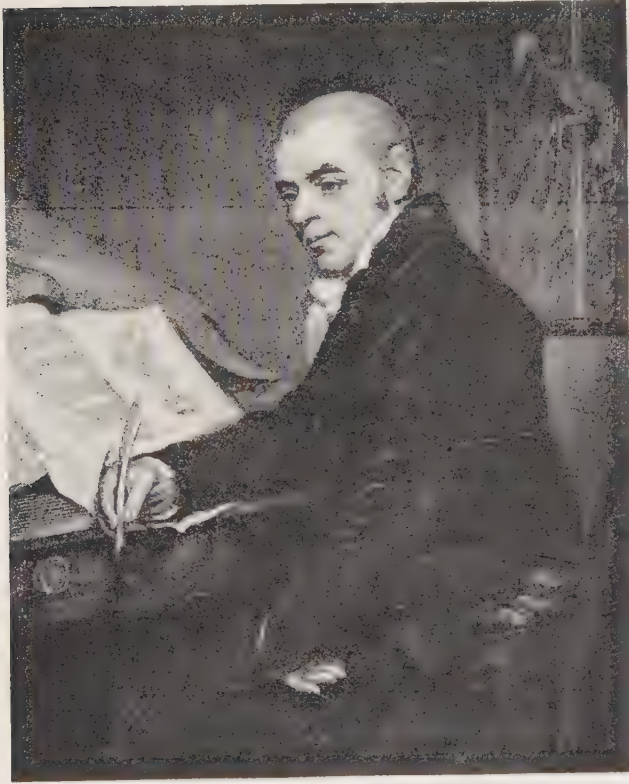
And bury me in my brother's church,
 For that will safer be,
 And I implore, lock the church door,
 And pray take care of the key.



FIG. 3.—William Cheselden who was reprimanded for holding private courses in anatomy.

And all night long let three stout men
 The vestry watch within,
 To each man give a gallon of beer
 And a keg of Holland's gin;
 Powder, and ball, and blunderbuss,
 To save me if he can,
 And eke five guineas if he shoot
 A resurrection man.

And let them watch me for three weeks,
My wretched corpse to save,
For then I think that I may stink
Enough to rest in my grave.



Joshua Brookes

FIG. 4.—Joshua Brookes who incurred the animosity of the "resurrection-men" on more than one occasion.

The surgeon laid him down in his bed,
His eyes grew deadly dim,
Short came his breath, and the struggle of death
Distorted every limb.

They put him in lead when he was dead,
 And shrouded up so neat,
 And they the leaden coffin weigh,
 Lest the plumber should be a cheat.

They had it solder'd closely down,
 And examined it o'er and o'er,
 And they put it in a patent coffin,
 That he might rise no more.

For to carry him off in a patent coffin
 Would, they thought, be but labor in vain,
 So the undertaker saw it bought of the maker
 Who lives by St. Martin's lane.

In his brother's church they buried him,
 That safer he might be,
 They lock'd the door, and would not trust
 The sexton with the key.

And three men in the vestry watch,
 To save him if they can,
 And should he come there to shoot, they swear
 A resurrection-man.

* * * * *

So all night long, by the vestry fire,
 They quaff'd their gin and ale,
 And they did drink, as you may think,
 And told full many a tale.

* * * * *

They look'd askance with greedy glance,
 The guineas they shone bright,
 For the sexton on the yellow fold
 Let fall his lantern light.

And he look'd sly, with his roguish eye,
 And gave a well-timed wink,
 And they could not stand the sound in his hand,
 For he made the guineas chink.

And conscience late, that had such weight,
 All in a moment fails,
 For well they knew, that it was true:
 A dead man told no tales.

* * * * *

Then, though the key of the church door
Was left with the parson, his brother,
It opened at the sexton's touch,—
Because he had another.

* * * * *

They laid the pick-axe to the stones,
And they moved them soon asunder,
They shovell'd away the hard-prest clay,
And came to the coffin under.

They burst the patent coffin first,
And they cut through the lead,
And they laughed aloud when they saw the shroud
Because they had got at the dead.

And they allow'd the sexton the shroud,
And they put the coffin back,
And nose and knees they then did squeeze
The surgeon in a sack.

The watchmen as they passed along
Full four yards off could smell,
And a curse bestow'd upon the load
So disagreeable.

So they carried the sack a-pick-a-back,
And they carved him bone from bone,
But what became of the surgeon's soul
Was never to mortal known.

Private watchers, affectionate relations, suspicious of the watchers, would often mount guard in relays, but if asleep for half an hour the resurrectionist had his work done. This state of things led some to employ the “resurrection-man” himself as a watcher, with a large bribe, but he in turn was outwitted by a cleverer one of his own class, who succeeded many times in making him incapable with drink.

At Crail, a house was erected for keeping the bodies until decomposition set in rendering them useless for anatomical purposes, and then buried. The graveyard walls were sometimes built of loose stones so as to make scaling almost an impossibility, and many a lodge was erected at a churchyard gate as a watch-tower, which would never have been placed there as an ornament.

The manner in which a body was “lifted” was to clear away the earth from the head of the coffin, and by means of a strong crowbar, made for the purpose, force it between the body in the coffin and the lid, which

was pressed up by lever power. The weight of the earth generally caused the lid to snap at about one-third its length. Whenever this happened, the body was drawn out. The nature of the narrow bed was evaded by rounding the shoulders well over the chest, and in drawing out the body gave it a turn so as to extract it by the diagonal opening already made. The greatest care was exercised to rearrange everything above the grave, and every detail was carefully noted by the

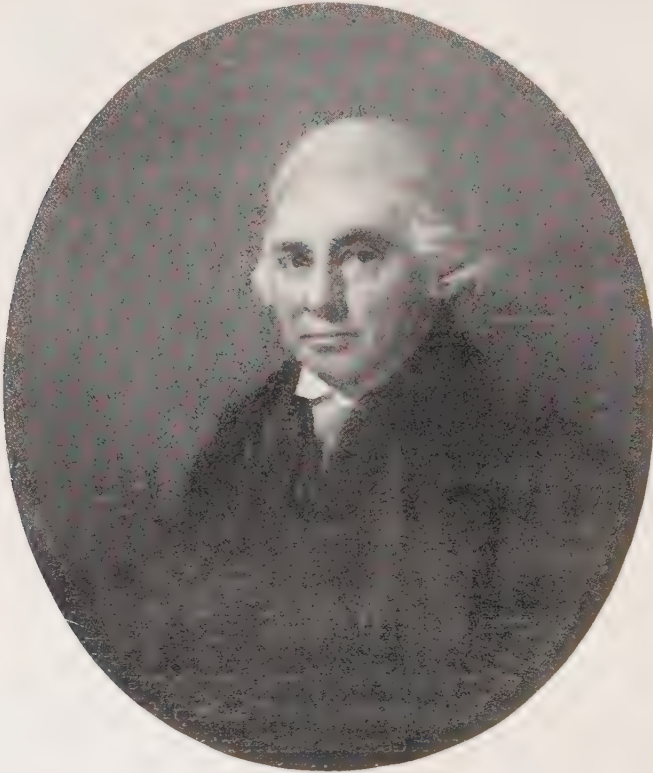


FIG. 5.—Alexander Monro to whom the body of William Burke was delivered by the court of high justiciary and by him publicly dissected and anatomized.

“resurrection-man,” the slightest alteration in a plant or an oyster-shell being enough to tell the practiced eye of desecration.

An idea of the amount of money that could be made in body-trafficking can be judged from the testimony given by a body-snatcher before the Anatomy Committee of the House of Parliament. A gang of six or seven disposed of 312 bodies during the regular dissecting session. The average price of an adult body was £4, 4s., thus reaping an income of 1,328 guineas, or about \$6,000.00, nearly a thousand dollars apiece.

This was exclusive of the teeth, which were generally sold to dentists, and in which these men did a large trade, and when not working bodies, the “resurrection-men” were engaged in stealing teeth from wounded men on stricken fields, and haunted the battlefields of the Peninsula, adding still further to the horrors of war. Teeth were very valuable in those days, and in one instance a full set brought sixty pounds. Bodies were classified as “large,” “small” and “foetus.” A “small” was a body under three feet long and sold at so much per inch.

In a very interesting book, “The Diary of a Resurrectionist,” the following laconic entries were made:

“Wednesday, Jan. 8, 1812. At 2 A. M. got up, the Party went to Harps, got 4 adults and 1 small, took 4 to St. Thomas’. Came home, went to Mr. Wilson & Brookes, Danl. got paid £8, 8, 0, from Mr. Wilson. I recd. £9, 9, 0 from Mr. Brookes. Came over to the borough, sold small for £1, 10, 0. Recd. £4, 4, 0 for adult. At home all night.”

“Friday, Aug. 28, 1812. Separated to look out; brought the F. from Bartholm. to St. Thomas, having got settled took from Hollis £1, 0, 0, afterwards met at St. Thos. & went to St. Jns. Ben not with us work’d two holes one bad, drew the C.ns. (opened two graves; one body too decomposed to bring away, so they drew the canine teeth and sold them) & took the above to St. Thos.”

The state of affairs in Edinburgh was identical with that of London, with the exception that criminals were fewer and anatomical students more numerous than in the southern capital. The great medical attraction in Edinburgh was the teaching of anatomy successively by the Monros, father, son and grandson, who as university professors of anatomy, from 1720 to 1846, made Edinburgh world-famous. Unfortunately, the progress of the teaching of anatomy was slow here as in London, being hampered by law and superstition, and body-snatching was engaged in, there being no other way of getting material. Extramural teaching in Edinburgh attained its perfection under Dr. Robert Knox, who had a class of 505 students during 1828 and 1829. The demand for material was, of course, as great here as in London, and bodies brought from £10 to £20 each. Paris was the paradise of the anatomist on account of the great number of bodies to be easily obtained, and the absence of awkward inquiries about suspicious deaths. From France, as well as England, importations were made into Scotland.

The schemes and stratagems employed to ensure a safe deliverance of bodies procured at a distance from the centers of teaching were truly ingenious. The supply was sent in trunks and hampers, either anonymously, addressed or without any address. Previous to the trunk being sent to the depot or freight house, an invoice or a letter of advice was sent by mail, stating that on a certain train, and on a certain day,

a body packed in a particular box or trunk with a certain address, or marked perishable, glass, to be kept dry, will be forwarded accordingly. A person is in waiting at the office to claim such a package, pay the charges, and it is safely delivered at the proper destination. An amusing anecdote is told of how packages sometimes got mixed in delivery. A porter one day brought a box to a certain lecture room, and as this box was very similar to those in which bodies generally came, and without any address or mark, it was understood by the porter and by those to whom it was delivered, that it contained a body. Some little time after the porter was gone the box was opened, but to the utter astonishment of those present, instead of a dead body it contained a very fine ham, a large cheese, a basket of eggs and a huge ball of yarn. A present, no doubt, from a country cousin, and intended to have reached a different destination. A body in a box without address had come by the same conveyance, and had no doubt been changed by mistake, but what the feelings were of the party who received it can only be guessed at.

The wholesale way in which the "resurrection-men" worked is shown in the diary already referred to :

"Saturday, Dec. 28th, 1811 ; At 4 o'clock in the morning got up, with the whole party to Guy's and St. Thomas' Crib, got 6 took them to St. Thomas's. Came home and met at Thomas's again, packd. up 3 for Edinboro, took one over to Guys."

"Wednesday, Jan. 15th, 1812; Went to St. Thomas's. Came back, pack'd up 2 large & 1 small for Edinburgh. At home all night."

Such were the everyday occurrences in London and Edinburgh medical life. The realization of the extent to which traffic in human corpses had grown was brought about in 1828 when in Edinburgh occurred the horrible episode of Burke and Hare, who, in a low lodging house, smothered their victims and offered their bodies for sale.

On the morning of Friday, October 31, 1828, William Burke made the acquaintance of a poor beggar widow, whose maiden name had been Docherty. By a coincidence Burke's mother was a Docherty, so in the fullness of his heart he offered to give breakfast to the poor woman and during the day closely questioned his guest about the old home and family. He grew more and more friendly, until he finally offered her a lodging for the night. To accommodate her, Burke had to evict a married couple named Gray, but arranged for them to sleep at the house of his friend, Hare, close by. Burke was living with a woman, Helen McDougal, who passed as his wife. His neighbors were Irish of the poorest class, and on the evening in question, Hallowe'en, they came in and took their whiskey.

The next morning Burke sent for Gray and his wife to come and have breakfast, and they found on their arrival that Mrs. Campbell, or

Docherty, was no longer there. McDougal vouched and answered that she had been troublesome in the night, and that they had turned her out. After breakfast there was more whiskey and merriment, and Mrs. Gray's curiosity was aroused by Burke's anxiety lest anyone should go near a heap of straw and litter at the foot of the bed. Not until late in the afternoon, when left alone with her husband, did she have an opportunity to investigate. Then she went straight to the straw, and



FIG. 6.—Sir Astley Cooper, who probably more than any man of his time knew thoroughly the secrets of the "resurrection-men."

groping in it, felt a human arm, and half under the bed lay the naked and lifeless body of the beggar woman. The Grays, horror-stricken, hastened from the room, spurning the entreaty of McDougal, who met them in the doorway, that they say nothing to the police. By eight o'clock Burke and McDougal were arrested by the police as they were coming out of the old tenement, sunk below the level of the street. The body was not to be found, but it was ascertained that shortly after six o'clock Burke, McDougal, Mr. and Mrs. Hare had all been seen coming

up from the sunken flat accompanied by a porter carrying a packing-case, stuffed on top with straw. The next morning a search was instituted, and the first place visited was the dissecting-room of Dr. Knox.

Burke after a long trial confessed and was executed January 28th.

TRIAL
OF
WILLIAM BURKE
AND
HELEN M^cDOUGAL,

BEFORE THE
HIGH COURT OF JUSTICIARY,
AT EDINBURGH,
ON WEDNESDAY, DECEMBER 24. 1828,

FOR
THE MURDER OF
MARGERÏ CAMPBELL, OR DOCHERTY

TAKEN IN SHORT HAND BY MR JOHN MACNEE. WRITER.

WITH AN ILLUSTRATIVE PREFACE. ALSO PORTRAITS OF BURKE,
M^cDOUGAL, AND HARE,—VIEW OF THE INTERIOR OF
BURKE'S HOUSE, PLAN OF THE PREMISES, &c.

“ ——— *Specus et Caci detecta apparuit ingens
Regia, et umbrosæ penitus patuere cavernæ.* ”
ÆNID, LIB. VIII.

“ The Court of Cacus stands reveal'd to sight;
The cavern glares with new admitted light. ”
DRYDEN'S VIRGIL, Book 8.

EDINBURGH

ROBERT BUCHANAN, 26, GEORGE STREET, WILLIAM HUNTER, 23,
HANOVER STREET; JOHN STEVENSON, 87, PRINCES' STREET,
AND BALDWIN & CRADOCK, LONDON.

MDCCCXXIX

FIG. 7.—Title-page of the trial of Burke and McDougal before the high court of justiciary at Edinburgh, December 24, 1828.

The lurid scene closed hideously with a rush of thousands of students into the Edinburgh anatomical theatre to dissect the body of Burke after execution. His skeleton is in the medical museum of the University of Edinburgh. Hare turned King's evidence and was released early in February. It is not known when he died, but he survived Burke for

over forty years. Vengeance followed him, and when his identity became known to some fellow-workmen, they threw him in quicklime and blinded him, and he spent his last days as a blind beggar on the streets of London.

Burke and Hare owned to sixteen murders in the course of a few months, and the number might have increased indefinitely but for the accidental discovery of Docherty's body. The victims were industriously plied with liquor till he or she became unconscious. Then the two partners in crime would fall upon them, and while Hare usually choked the poor wretch to death, Burke would throw himself upon the body and thus hasten the end. The two women were undoubtedly privy to the crimes, but they invariably left the rooms while the murder was being perpetrated. It was told that Burke and Hare had been overheard by their wives to say, that if bodies failed them they would not starve so long as they had them to fall back on.

The crimes had been suggested to them by the liberal price given by Dr. Knox for the body of an old pensioner who died a natural death in Hare's house. The bodies were all taken to Knox's dissecting-room. No questions were asked, and one of his assistants told them on the first visit that he would be glad to see them when they had any other body to dispose of. Burke has enriched the English language with a new synonym, "burking," which does not always mean killing a person for the purpose of selling the body, but refers to the method adopted, viz: suffocation.

Horrible as this crime was, another occurred in London three years later which stirred the English public against the "resurrection-men" and the anatomists and aroused Parliament to the realization that some determined steps must be taken to prevent the wholesale spoilation of graves. On November 5, 1831, three men, Bishop, May and Williams, tried to dispose of a body at the dissecting-room of King's College, but the appearance of the subject excited the porter's suspicion of foul play, so that he communicated with the demonstrator of anatomy, who further confirmed the porter's suspicions. To delay the men until the police could be notified, a fifty-pound note was produced, and as no change could be made the men waited. Soon after, the police arrived and the men taken into custody. A jury found all three men guilty, and sentenced them to death. Bishop and Williams were executed, but May was reprieved and sentenced to transportation for life. The bodies of Bishop and Williams were removed from Newgate to Surgeon's Hall on the evening of the execution, the Royal College being by charter, as mentioned before, entitled to the bodies of all convicts found guilty of murder and sentenced "to be dissected and anatomised." The bodies were immediately afterwards given up, the body of Bishop to King's College and that of Williams to Dr. Tuson's Theatre of Anatomy.

From the confessions of Bishop and Williams it was shown that they had tried to sell the body at Guy's Hospital, but being refused there made two other unsuccessful sales until they tried King's, where the crime was detected. The body was that of an Italian lad, 14 years old, who made his living by showing white mice. They had enticed the boy to their rooms, drugged him with opium and then lowered his body into a well until he was suffocated. His teeth were extracted and sold for twelve shillings to a dentist.

Public feeling was now very strong in favor of some law, and after various measures were introduced into Parliament from March, 1829, to December, 1831, it was not until August, 1832, that the famous Warburton's Anatomy Act finally passed safely through both Houses of Parliament and became a law. This act provided that the Secretary of State for the Home Department in Great Britain and the Chief Secretary in Ireland were empowered to grant licenses for anatomical purposes to any person lawfully qualified to practice medicine, to any professor or teacher of anatomy, and to students attending any medical school on an application signed by two justices of the peace, who would certify that the applicant intended to carry on the practice of anatomy.

It provided, further, that the executors or other persons having lawful possession of a body, excepting undertakers, might give it up for dissection unless the deceased had otherwise expressed a wish during life or unless a relative objected to the body being given up.

If a person had expressed a wish to be dissected, this was to be carried out unless the relatives raised an objection. No body was to be moved for anatomical purposes until forty-eight hours after death, nor until the expiration of twenty-four hours' notice to the Inspector of Anatomy. A properly filled death certificate had also to be signed by the medical attendant before the body could be moved. Dissection of the body of murderers was done away with. Three inspectors were appointed to carry out the law, one for England, one for Scotland, and one for Ireland. There was no provision for punishing persons found violating graves, as this had been decided was an offense at common law. The success of the Act was almost immediate, and very few alterations have been made in it up to the present day. After its passage the "resurrection-men" pass out of history, but public feeling ran high against them for a long time. Many sought employment under assumed names, but when found out had to move to other quarters.

Amusing anecdotes are told of hired resurrectionists and their conspiracies with grave diggers and night watchmen. A hospital demonstrator was taken by one of these professionals to interview a grave digger as to the "working" of a body. The grave digger represented himself as so indignant at being asked to betray his trust, that he drew a huge horse pistol and pointed it at the demonstrator, adding a volley

of oaths. Escaping from the house at the peril of his life, so he thought, he encountered the waiting ‘‘resurrection-man.’’ ‘‘Now you see, sir, what desperate ruffians I have to deal with; you’ll need to give me something handsome to buy that man over.’’

Writers of fiction, Dickens in the ‘‘Tale of Two Cities,’’ Warren in the ‘‘Diary of a Late Physician,’’ under the title of ‘‘Grave Doings,’’ Lytton in ‘‘Lucretia,’’ and Stevenson in the ‘‘Body Snatcher,’’ have taken advantage of these stirring times to draw characters and descriptions from. And finally, we have Thomas Hood’s humorous poem, or as he calls it, a pathetic ballad, on ‘‘Mary’s Ghost.’’

’Twas in the middle of the night,
To sleep young William tried,
When Mary’s Ghost came stealing in,
And stood at his bedside.

O William, dear! O William dear!
My rest eternal ceases;
Alas! my everlasting peace
Is broken into pieces.

I thought the last of all my cares
Would end with my last minute;
But tho’ I went to my long home,
I didn’t stay long in it.

The body-snatchers they have come,
And made a snatch at me;
It’s very hard them kind of men
Won’t let a body be!

You thought that I was buried deep,
Quite decent-like and chary,
But from her grave in Mary-bone
They’ve come and bon’d your Mary.

The arm that us’d to take your arm
Is took to Dr. Vyse;
And both my legs are gone to walk
The hospital at Guy’s.

I vow’d that you should have my hand,
But fate gives us denial;
You’ll find it there, at Doctor Bell’s,
In spirits and a phial.

As for my feet, the little feet
 You used to call so pretty,
 There's one, I know, in Bedford Row,
 The t'other's in the city.

I can't tell where my head is gone,
 But Doctor Carpue can;
 As for my trunk, it's all pack'd up
 To go by Pickford's van.

I wish you'd go to Mr. P.
 And save me such a ride;
 I don't half like the outside place,
 They've took for my inside.

The cock it crows—I must be gone!
 My William, we must part!
 But I'll be your's in death, altho'
 Sir Astley has my heart.

Don't go to weep upon my grave,
 And think that there I be;
 They haven't left an atom there
 Of my anatomie.

THE X-RAY AS A DIAGNOSTIC AID.

BY EDWARD HOLMAN SKINNER, M. D., Kansas City, Mo.

The diagnostic field of the x-ray is constantly widening. Each month brings forth some new means of application or some valuable advance in technique. The increased competition among the manufacturers of tubes and apparatus works to our advantage for as we increase the efficiency of our tubes to the minimum exposure we are approaching that mirage of the x-ray enthusiast—the split second exposure with a maximum detail.

The diagnostic field of the ray in traumatic surgery is, at the present time, thoroughly established. In diseases of bone tissue it is constantly employed in differential diagnosis. The ray in medical diagnosis is a more or less undeveloped field. The increased efficiency of tubes and interrupters, together with the introduction of shadow-producing substances into visceral cavities, has opened up this field of diagnosis in the tissues of low density. In fact, the ray has become a necessity in modern diagnosis and cannot be neglected any more than the microscope. Where formerly the courts questioned the introduction of skiagraphs as evi-

dence, they now hold him negligent who fails to use this aid to accuracy in diagnosis.

The use of the ray in renal, ureteral, vesical and gall stone cases, on account of the many failures in the early days of the ray, has been neglected more than it should be. The interpretation of the negative in the hands of one familiar with the value of shadows is of the utmost importance. Radiographic shadows remind me of the attempts of some to figure artistic shapes on the moon. One is only able to decipher them by perseverance in observation. The proper reading of a negative is truly an art. So much also depends upon the development of the negative by the one who made the exposure and especially is this true in stone work. I have always favored a lengthy development of the negative and this becomes of the utmost importance in searching for detail in other than bone tissue. It becomes the x-ray operator to familiarize himself with the principles and practice of photographic chemistry in order to get the most out of his work. It is absolutely impossible for the commercial photographer to give the time necessary to the development of x-ray negatives and further he is unfamiliar with the exposure and other details which go to bring forth the good negative.

The advanced work in the use of the bismuth emulsion is of peculiar interest to the internist. Hulst, of Grand Rapids, has been doing the best work along these lines in America. On account of the similarity in density of the abdominal organs it becomes necessary to introduce a non-irritating, opaque substance in sufficient quantity to give us the outlines of the hollow viscera. As much as one ounce of bismuth emulsified with milk may be given without untoward results. For stomach work the radiograph is taken immediately, also in diverticula of the œsophagus. It is advisable to quiet the peristaltic action of the bowels in stomach and intestinal work. In as much as we are not attempting to get the greatest detail in our plates of this character it is possible to take a short exposure and then make a lengthy development to bring out the outlines of the viscera as marked by the bismuth emulsion. The patient must be subjected to two exposures in splanchnoptotic conditions on account of the change of positions in the organs in horizontal and vertical postures. By this means we may determine not only the position of organs in Glenard's disease, but we may also test the motor efficiency of the stomach, diagnose a dilated stomach or hour-glass stomach.

Radiographic work of the thorax has a large field. The diagnosis of the thoracic tumors and aneurysms has long held our attention. The varying density in normal and pathological conditions of the chest viscera makes the work easier than abdominal radiography. The one great difficulty is in making a short enough exposure to obviate the blurring of the negative by the respiratory movements. Fluoroscopic findings are very

satisfactory in chest diagnosis to note the excursion of the diaphragm, the position of the heart and, in an incipient tuberculosis, we may be able to determine the arhythmic excursion of the diaphragm, high scapula, small left and large right heart that materially aid in an early diagnosis of this condition. The radiograph can show the congested pneumonic areas, cavities, displacement of organs and presence of tumors.

On account of the greater ease with which bone detail is obtained on the radiographic plates we have had more reports to familiarize ourselves with this field of the ray. The correct diagnosis and reduction of recent fractures under the ray has without a doubt given the surgeon and the patient more satisfaction than any one other recent feature of surgical progress. We avoid the discomfort and pain occasioned by the manipulation of the tender parts and the uncertainty of a correct diagnosis of the lesion when the tissues are swollen. In cases of so-called sprains where the case has run along without improvement for a week or ten days we frequently find that there is really a splintering of the bone at the sprained joint which readily accounts for the delayed recovery. This is especially liable to happen in injuries of the wrist and hand or ankle and foot.

We are frequently called upon to determine the location and extent of an osteomyelitic lesion. The areas readily show up on account of the decreased resistance of the diseased bone to the penetration of the x-rays. In arthritis deformans the ray quickly determines the extent of the ostitic proliferations or of the disintegration of the articular extremities. In the diagnosis of osteosarcoma we are aided by the ray as we are able to show the distorted outlines and the absorption of bone tissue in the vicinity of the lesion. In fact in all neoplastic growths of bone tissue we are able to reach an earlier and more comprehensive diagnosis with the aid of the ray than by simply depending on our clinical findings.

It is hardly necessary for me to call your attention to the use of the ray in diagnosis of tubercular lesions in bone tissue. We are able to show the focus of infection by the absorption area of involvement that is impressed upon the x-ray negative. In psoas and iliac abscess we may be able to determine the outlines of the abscess cavity and the areas of bone involvement.

There is a painful affection of the heel that the ray very frequently helps to diagnose. The patient will complain of rheumatism that bothers him in the morning on arising, but does not necessarily increase in painfulness during the day. There are no signs of inflammation and anti-rheumatic treatment fails to clear up the case. We have found in two such cases that there was a small spur on the plantar surface of the calcaneum that when removed completely relieved the case. These spurs may be determined by the ray.

Not only as a diagnostic aid but as a therapeutic measure there is a wonderful field for the ray. The future holds so much in store for this marvelous, unknown light that we may look for great advances as time brings more minds into this department of medicine and surgery.

211-212 Rialto Building.

SURGERY AMONG THE CHINESE.

By DR. TEE HAN KEE, Municipal Physician Bureau of Health, Manila,
P. I.

It will not fail to interest medical men who are concerned in the progress of our profession and the welfare of humanity the world over when we come to a discussion of surgery among the Chinese—the methods employed by them in combating diseases and the resources at their command in the treatment of accident and other surgical diseases in general.

Since the earliest days of China (3000 years B. C.) up to the present time the Chinese have had a system of the art of healing—surgical and medical—strictly and purely of their own, and it is not until very recently that the Chinese have adopted partially, modern medicine and surgery, or, as they term, "Western Medicine," since it came from the West—Europe and America. Since the opening of the first five China ports to foreign trade, Western medicine has slowly but surely gained its foothold in China, until now there is scarcely a port where there is no modern hospital, or a town where there are no Chinese doctors practicing modern medicine and surgery. Moreover, the Chinese Government officials have opened their eyes by establishing modern medical colleges at Tientsin and Peking and it has been decided that more are to be established in the principal cities and towns of every province. It will not be long before we will be able to find modern medicine and surgery taking the place of the old throughout China.

Now it is this strictly pure Chinese art of healing that I am going to discuss. I will not attempt to touch on modern medicine or surgery, as we all know very well what modern surgery is and how it is practiced.

Since surgery is based on anatomy and physiology, and as dissections on human bodies are not practiced in China—in fact they are not allowed as it is considered inhuman to open a dead body—therefore their notions on anatomy and physiology are absurd. Their descriptions of the structure and functions of the different internal organs are all from pure guesswork. The heart is supposed to be attached to the trachea and contains more air than blood. The lungs are believed to control the sense of smelling and to be the centre for the production of air. To the liver is assigned the office of controlling the sense of seeing, and the gall bladder controls the will power.

Nothing has been written by them about surgical pathology and bacteriology, though from empirical experiences they know something about aseptics and antiseptics. They always boil their instruments before using and never wash any wound with unboiled water for fear, as they say, of suppuration. They have quite a number of substances used as antiseptics, their greatest favorites being preparations of mercury, borax and common salt.

Anæsthesia has been known since five thousand years ago. They could produce general anæsthesia as well as local. For producing local anæsthesia they use eight different substances mixed with alcohol and applied locally. One of the substances is a Chinese plant which has the taste of

圖法同軌學索振。

Fig 7



Apparatus for treating fracture of the ribs

cocaine and another is pepper; the rest of them are all leaves of certain plants which produce more or less numbness when tasted. They have six substances for producing general anæsthesia. They are administered by mouth and are used chiefly by the Chinese for extracting arrow heads, setting fractures, reducing dislocations, etc. The ingredients contained in them are partly the same as those for the local anæsthesia. These anæsthetic substances, both local and general, seem to be rather safe, as no bad effects or deaths have been recorded.

Surgical Dressings and Appliances.—Operations are very seldom performed, except the extraction of foreign substances from the body, scraping of necrotic bones and puncturing of abscesses. Abdominal opera-

tion so far has not been recorded as having been performed by Chinese methods, though trephining of the skull has been done several times.

As in medicine, they have the same curious non-scientific classification of surgical diseases—the “Hot” and “Cold” system. For example, an abscess, when rapidly formed and at the stage toward suppuration, with all the signs of inflammation—as redness, swelling, heat and pain—is called the “Hot Abscess.” In such a case cold lotions and soothing ointment have to be applied. Cooling drugs, such as diuretics, also are to be administered internally. When an abscess is slowly formed with no tendency towards suppuration and is suffered by a weak person, and shows only moderate signs of inflammation, it is called the “Cold Abscess.” For such cases, hot poultices, or other warm applications are generally applied, or cauterization, or cupping, is used. Bread, rice and linseed are generally used as poultices. Preparations of mercury and borax are often used as ointments and lotions.

Alcohol, menthol, and lead are employed as evaporating lotions and often applied for pains and swelling due to inflammation.

Drainage tubes in the form of feather quills, decalcified bones, or bamboo sticks are sometimes used. They are employed for deep-seated abscesses or wounds. Bandages and splints are often applied especially in cases of fracture and dislocations of bones. There are no such instruments as catheters used for retention of urine. In such cases, they always depend on warm sitz baths and internal remedies.

Cauterization is by far the most frequently employed. It is not only used for arresting hæmorrhage, destroying growths and cutting tissues, but it is supposed to cure innumerable kinds of diseases by being applied to certain points of the body which will be described later on.

Venesection has sometimes been performed for cases of extremely plethoric subjects. It is done by cutting any vein of the body with a small pointed scalpel. The veins most frequently chosen are those of the fingers as this region is considered to be the least dangerous.

Torniquets for arresting hæmorrhage have at times been used, but bleeding is almost always stopped by tamponing the wound, by direct digital pressure, or in severe cases, by cautery. Ligatures have been used for dividing minor growths, such as warts, pile, etc., but never used for tying bleeding vessels.

Amputations are sometimes performed. These are usually employed for gangrene or necrosis of bones of the extremities. The operation is performed with a big knife and the part is chopped through with much force. Cauterization is the method used for arresting the hæmorrhage, therefore, the stump generally presents a very ugly appearance and often the wound is never healed up.

Thus far, I have given you a general idea about Chinese surgery; it

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will now be interesting to know how a surgical disease is diagnosed and how each particular case is treated.

How a Surgical Case is Diagnosed.—The following rules were laid down by an eminent surgeon to the Chinese Emperor about 250 years ago:

1. Inspection. 2. The voice. 3. Questions on patient's condition and previous history. 4. The pulse.

1. Inspections are made as follows:

(A.) Appearance of the face: 1. The forehead represents the heart and when the heart is diseased the face presents a reddish or flushing color, e. g., acute endocarditis. 2. The nose represents the spleen and when the spleen is diseased the face presents a yellowish color, e. g., malarial cachexia. 3. The left cheek represents the liver and presents,

when the liver is diseased, a greenish color, e. g., jaundice. 4. The right cheek represents the lungs, and the face is colorless or very pale when the lungs are diseased, e. g., tuberculosis of the lungs.

(B.) Appearance of the tongue: 1. When the disease is "Cold" the tongue is pale, moist and thinly furred. 2. When the disease is "Hot" the tongue is red, dry and thickly furred. 3. When the patient is dying, the tongue is dry and covered with a thick darkish yellow fur. 4. Appearance of diseased part, for example, abscess on the back. The



abscess is said to be "Hot" when the cardinal signs of inflammation are present and "Cold" when not.

2. The Voice. Find out if the voice is abnormal, e. g., phthisis produces a weak voice, sore throat a harsh voice, and insanity an incoherent speech.

3. Questions on patient's condition and previous history:

A. Ask if the patient has any fever or shivering; if he has any excessive perspiration; any headache; any appetite; movement of bowels,

pain in chest or abdomen; defect of hearing; sore throat, etc. B. Inquire of the patient about his previous illness, about the cause and symptoms. C. In women, find out if the menstruation is regular. D. In children, ask if the child has or has not previously suffered from smallpox, chickenpox or measles. The Chinese doctors believe that every person is sure to suffer every one of these three diseases during the life time. This explains the reason why children are often intentionally exposed to persons suffering from these diseases. They believe that children bear these diseases better and with less danger.

4. The Pulse.—The pulse is always felt in both medical and surgical diseases, as they say, to ascertain whether the disease is "Hot" or "Cold." The wrist is always the part chosen for the purpose. They claim that the rate and volume is different in healthy persons during the different seasons. In spring the pulse should be full, in summer large, in autumn thready and in winter hard.

I will now mention some special diseases and describe how these different diseases are treated according to the Chinese method.

1. Bites of rabid dogs—Hydrophobia. The patient should at once be brought to a quiet place, where the wound is to be washed at once with cold tea or any other lotion, and then cauterized with hot iron. Then search the head immediately for two or three red hairs which are to be pulled out. The juice of "Ki Choy" (a kind of plant) is to be given internally per mouth; this juice is to be repeated every seven days for seven times. Patient should for one year avoid eating pork and fish, alcohol drinking and sexual intercourse, and not to take dog meat during the life time. Application of the juice of the leaves of evergreen is also advised.

2. Bites by horse are treated by asking the patient to chew a piece of pork with rice and then apply it to the wound. It stops the pain at once and healing takes place quickly.

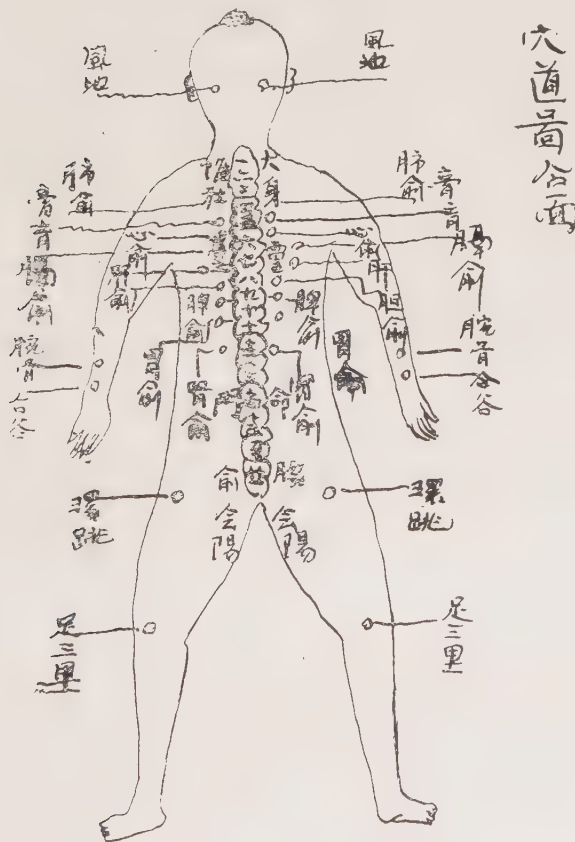
3. Bites by poisonous snakes. Cut open an old smoking bamboo pipe; wash out the inner surface of the pipe with cold water, and allow the patient to drink it. If the snake is poisonous, the patient will not feel the pungent taste of the nicotin. The same stuff is to be applied locally. This treatment is recorded to have been tried with success many times. Another method is to rub two knives together in water and drink it. Applying to the wound the juice of a plant called "Lun Wong Kek" is said to be very effective. When the snake is coiled round the body of a person, with no tendency to loosen, the patient is advised to roll round on the ground when the snake will feel tired and loosen itself.

4. Burns and scalds. Honey with boiled water, or warm sugar water, or child's urine is to be given per mouth immediately. Peanut oil shaken with lime water applied to burned surface. The burned surface should

never be washed or soaked in cold water, as is often done. Human milk with salt has also been used.

5. Hæmorrhage from cut wounds. Slice a piece of lean meat and apply to the cut surface; hæmorrhage is at once stopped. Apply to the wound burned paper. Tampon the wound with tobacco, or cauterize with hot iron.

Fig. 12
Positions of the "nerve den."
(Back view)



6. Concussion and compression of brain with hæmorrhage from mouth and ears, and patient in an insensible state resulting from blows or falls. Keep the patient perfectly quiet in a dark room and avoid all visitors. Allow the patient to sit down with arms and legs folded. Give at once per mouth boy's urine, or warm water with sugar and alcohol.

Apply to the head or wounded surface warm soil dug up three feet below the surface of the earth.

7. Prolapse of intestine from stab wound. Wash the wound and prolapsed part with boiled vinegar; the intestine will spontaneously slip back. Apply to the wound skin of newly killed chicken.

8. Foreign bodies.—A. Needle in palm. If it is impossible to extract it, give the patient internally ash of burned feather of hawk mixed with alcohol. Apply to the wound a mixture of finely ground porcelain powder and olive oil, or ham skin; the needle will slip out gradually like magic. B. Shots or shells in flesh. Apply to the wound fish stomach ground together with starch; the shell will find its way out. C. Fish bones in throat. Give the patient saliva of dog obtained by hanging the dog up-side down (dog's saliva is used because dogs are skillful in digesting bones); or give the patient powdered bone of tiger. Powdered liver of fish when used will melt the bone.

We now come to fractures and dislocations of which the Chinese from experience know something.

Fracture. The following symptoms are described in a Chinese book on surgery:

1. Abnormal mobility. 2. Deformity. 3. Crepitus felt on manipulation. 4. Swelling and ecchymosis, pain and tenderness.

The following methods are advised to reduce a fracture:

1. Manipulation and traction. 2. Extension by pulleys in difficult cases.

To diagnose a case of fracture from dislocation:

1. Dislocation has no crepitus. 2. Dislocation has rigidity while fracture has abnormal mobility. 3. The deformity in dislocation when reduced has no tendency to recur.

Treatment.—Treat the swelling and bruise with evaporating lotions. Reduce the fracture by manipulation, traction, or counter extension. Give local anæsthetic to stop the pain, and general anæsthetic in case the fracture is difficult to reduce. Apply splint to the fractured part. (See figures 1 to 10.)

Now, there is another method of treatment termed by the Chinese "the spiritual medicinal cauterization treatment." This treatment is believed to be omnipotent. It cures as if by magic nearly all the surgical and medical cases, especially neuralgic diseases. The whole body, head, neck, trunk and extremities are believed to be represented by many points, or as they are called "nerve dens" (see fig. 11). Each "nerve den" represents the cause of certain diseases. For example, the center of the forehead is supposed to be responsible for such troubles as coryza or influenza, therefore the person suffering from these diseases will recover at once by cauterizing that particular spot, or "nerve den." Or again, when a

person suffers from pains in the stomach or heart, these troubles will therefore be cured by cauterizing the "nerve den" in the center of the epigastrium, which spot is believed to be responsible for such pains (see fig. 11).

This "medicinal cauterizer" is prepared by rolling in a paper 17 different kinds of Chinese medicines into a stick (some of these medicines are sulphur, cinammon, spice, deer's horn and cardamon). This stick is then burned and applied to the "nerve den."

The cauterizing of the "nerve den" may be applied either *Directly* or *Intermediately*. It is termed *Direct* when the "medicinal cauterizer" actually burns the part, and *Intermediate* when there is something interposing between the skin and the cauterizer. The material used for the interposition is either a bandage, a slice of ginger, or a piece of bread.

There are three kinds of the "spiritual medicinal cauterizer," viz: 1. The "medicinal cauterizer." To be applied *Directly* or *Intermediately* to the skin. 2. The "spice stick," To be applied directly to the skin. 3. The "medicinal needle." Used by puncturing the "nerve den" directly.

I have seen this treatment performed among the Chinese, Japanese, Koreans, Anamites, Filipinos and East Indians.

How to use the "medicinal cauterizer:" 1. Make the diagnosis: Find out which "nerve den" is responsible for the trouble. Mark the spot with ink, and bandage that part with seven layers of red calico. 2. Light the "medicinal cauterizer" and apply it to the bandaged part until the patient feels hot on that part, then stop the treatment for a while, and apply again for at least seven times, or no more than 49 times. 3. The day must be fine and the room airy when the treatment is to be employed. 4. After the treatment, the patient must keep in bed for a while, and good wine must be given for helping the action of the medicine.

Surgery among the Chinese is after all empirical, superstitious, and not at all scientific, but, as I said before, the waves are turning, and old rags are being gradually replaced by new clothes. It will not be long before you will find China one of the centers for scientific research.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

ROENTGEN DIAGNOSIS IN TUBERCULOSIS OF THE LUNGS.—PFOERRINGER AND BUNZ (*Muench. Med. Wochen.*, No. 2, 1907).—Lay great stress upon the examination of suspected tubercular cases with the x-ray. The diagnosis can often be made in this manner when other methods leave us in doubt. In order to obtain the best results in treatment, the diagnosis must be made as early as possible. The physical examination is often doubtful; the finding of tubercle bacilli usually occurs too late; the tuberculin test cannot be applied by everyone. The authors report their findings with the x-ray in 136 cases. In 82 of these cases advanced changes were found. Chronic advanced tuberculosis shows itself as a large diffuse shadow and is easily recognized. In 42 cases the Roentgen findings corresponded with the results of the physical examinations; in 30 cases the Roentgen rays revealed more than the physical examination and in 10 cases, less. Cavities, in order to be seen, must occur in infiltrated areas and be empty. Latent central affections, glands, and peribronchitic affections are brought out by the x-ray when physical examination fails entirely to reveal them. Pleuritis sicca is not visible; exudative pleuritis is. Incipient apical catarrh demands most careful interpretation. In 54 cases showing apex involvement of some sort, 25 of them were shown by the x-ray to be tubercular in character.

The movements of the diaphragm may be seen with precision and any variation in them, and their relations to tubercular involvement, considered. Williams's sign, the unilateral diminution of the diaphragmatic excursion on the affected side, is a valuable one as studied with the x-ray.

ORTHOTIC ALBUMINURIA.—HEUBNER (*Berl. klin. Wochen.*, No. 1, 1907).—Various theories have been promulgated in explanation of orthotic albuminuria. As yet, however, no satisfactory explanation has been offered. In children it occurs not infrequently. Edel has attributed it to cardio-vascular changes which he found in a number of cases. Erlanger, Hooker, and others, have made a careful study of the blood pressure in this connection. It was found diminished in those with orthotic albuminuria. Loeb found the Koranyi quotient increased; a decrease of the sodium chloride excretion with simultaneous diminution of the quantity of urine. Inasmuch as this does not occur in nephritics he believes that most of the cases are of cardio-vascular origin. The author cites the case of a child ten years of age, who had 4 pro mille of albumin in the urine when up and about, and which promptly disappeared with bed rest. The child died ultimately of cerebral abscess

which offered the first opportunity to examine the kidneys in a case of this sort. Aside from a slight hyperemia and a few foci showing slight fatty metamorphosis of isolated cells, the kidneys were found practically normal. There were, however, evidences in the lungs and lymph nodes of a tubercular process, which tends to corroborate the statement of Mery that these cases are not infrequently a "pretubercular" manifestation.

INFLUENCES WHICH INTERFERE WITH THE HEALING OF GASTRIC ULCER.—TECKLENBERG (*Arch. fur. Verdauungskrankheiten*, Vol. xii, Pt. 6).—Believes that the chief obstacle in the way of complete and permanent cures of ulcer of the stomach is the stretching of the stomach. This "over-stretching" may be due to food and drink, to muscular atony, and to nervous causes, such as aerophagia and continued hypersecretion. The most important of these are muscular atrophy and the swallowing of air. When these influences are to be overcome in no other way, a gastroenterostomy is indicated. Ulcers which persist on account of these causes recover after gastroenterostomy.

DIAGNOSIS OF CARCINOMA OF THE STOMACH.—ZIRKELBACH (*Arch. fur. Verdauungskrankheiten*, Vol. xii, Pt. 6).—Conducted a series of observations in order to confirm the findings of Salomon with reference to the diagnosis of carcinoma of the stomach. Salomon found that in carcinoma of the stomach the washings contain more albumin and nitrogen than is found in the normal stomach, or in other pathological conditions. The stomach is thoroughly washed late in the evening and the patient is permitted to take no nourishment after the lavage. On the following morning the stomach is again washed out with 400cc. of physiologic salt solution and the quantitative determination in this is made for albumin and nitrogen. The author agrees with Salomon in every detail. He found in the examination of a large series of cases of all kinds that these substances were markedly increased in carcinoma.

UNUSUAL COMPLICATIONS OF BASEDOW'S DISEASE.—MOSSE (*Berl. klin. Wochen.*, No. 1, 1907).—Recites some interesting observations in cases of Basedow's disease. In one case in which there was marked improvement of the chief symptoms, there occurred a right-sided Graefe symptom with left-sided ptosis. These observations bear out the beliefs of Uthoff that in Basedow's disease there is an involvement of the bulbar nerves, especially the motor nerves of the eye. Whether the medulla oblongata is the seat of the primary lesion, or simply the locus minoris resistentiæ for the products of the thyriod gland, has not been determined. In another case with very pronounced symptoms there was total absence of a visible or palpable goitre. There was, in addition to the tachycardia, a marked irregularity of the heart's action not traceable to arterio-sclerosis. It was most probably due to the direct action of the poisons on the cardiac ganglia, or the myocardium. In 128 cases this was the first of the kind that he had observed.

A third case presented glycosuria. Naunyn, though he himself had never observed a case of Basedow's disease with spontaneous glycosuria, states that a number had been reported in the literature.

CONTUSIONS OF THE ABDOMINAL ORGANS.—HILDEBRANDT (*Berl. klin. Wochen.*, Jan. 7, 1907).—Calls attention to the frequency with which contusions of the abdomen occur as a result of increased industrial activity. He states, too, that a large majority of these cases may be saved if temporizing is not indulged in. He reports in his own experience 48 serious abdominal injuries with 39 recoveries and 9 deaths. The series included injuries to the stomach, intestines, spleen, liver, pancreas, kidneys, etc.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

A CONTRIBUTION TO THE STUDY OF OPSONINS.—Simon, Laner and Bispham. (*Jl. of Experim. Med.*, Vol. 8, No. 6)—While there is no doubt that Wright, by his work on opsonins, has opened up a new field of research, which may, theoretically and practically, result in a very important increase in our knowledge of dealing with infectious diseases, it has been the opinion of critical and careful observers that only the existence of certain substances in blood, influencing bacteria to be taken up by leucocytes, had been established, substances which the Germans called "bacteriotropic bodies," Wright opsonins. Wright was led to conclusions so far-reaching, and at the same time seemingly so convincing, that opsonin-enthusiasm is now reigning everywhere, and is liable to influence therapy in a profound way. It may be that this enthusiasm will prove justified by future work. For the present, it must be considered too early to draw any conclusions, much less to make a reaction not fully understood the basis of incisive procedures in the treatment of disease, and divert attention from those data that have enabled us to deal practically and theoretically with the phenomena of infection and immunity. For this the methods are not, as yet, exact enough. Especially the method of Wright, followed by almost any worker in this line, is influenced by so many subjective factors that exact comparisons are not possible. Simon and his co-workers have evolved a method that does away with the majority of these dangers and allows, at the same time, quantitatively, to determine the opsonin content of a serum. It allows, on the other hand, of subjecting the substances to investigations in all directions, and the results obtained are very remarkable and important. The opsonic index, established by Wright and based on an almost uniform quantity of opsonin in healthy individuals, must be taken *cum grano salis*. Simon has shown that in normal persons this quantity can and does vary greatly; in his way of measuring and at a dilution of 1:20, the value varies from 12 to 72 per cent. The authors have shown the influences that act on the variations in the same person, especially the process of digestion, etc. A uniform index, therefore, does not exist, and each individual has his own law. That digestion is a great factor in raising the opsonic content has been shown by Amberg,

who, in breast-fed babies always found a percentage higher than in adults, due to the fact that these babies almost constantly are in a condition of digestion. Investigations about the relation of opsonins to certain parts of the organism resulted negatively; nowhere did the extracts of exsanguinated tissues show the presence of these substances. The latter, therefore are peculiar for the blood alone. That the polynuclear leucocytes and lymphocytes have no relation to them, was demonstrated by special experiments.

The question of thermo-stability of opsonins is not solved yet; it appears, however, that the solution will lie in the direction of such a thermo-stability, if Dean's observations can be confirmed. The explanation given by Wright for Dean's findings cannot be accepted. A great problem is whether opsonins are specific or not. The whole vaccine theory of Wright is more or less based on the specific nature of these substances. The attempts that have been made by Bulloch and Wright to demonstrate the specificity of opsonins for the single forms of pathogenic bacteria cannot be considered as successful. Simon has studied the conditions for several different bacteria, and has come to the conclusion, that a specificity does not exist; his studies have shown that the opsonins form a constant quantity in the blood, and that the degree of phagocytosis, or the number of bacteria taken up by a cell, is influenced by a second factor that is variable. Experiments on the effect of tuberculin injection made with tubercle-bacilli and a staphylococcus, showed an absolute identical course in the rise and fall of the opsonin common for both of them. Although no staphylococcus infection was present in the tuberculous subject experimented upon, the opsonin for the coccus was present in very high percentage. All of these observations demonstrate that opsonin action is identical in character in the blood of all vertebrate animals, that opsonins are not specific and stimulate phagocytosis in a specific way only by the action of some other factor, the nature of which so far has not been discovered. That phagocytosis can take place without opsonins has lately been shown by Tunncliffe, for the fusiform bacilli and the influenza bacilli.

Simon's work, although not yet complete, has demonstrated that we must learn more about opsonins and their qualities, before we can draw such conclusions as have been promulgated by Wright, and have stimulated the arising of therapeutic measures, that after the old *post hoc propter hoc* are alleged in their results to be the proof of the correctness of those conclusions. The main problems of the opsonin action are altogether unsolved. The question of the varying virulence of pathogenic bacteria in regard to phagocytosis is not considered, nor is the character of the bacteria considered, after being exposed to opsonic action. What is the change in them that makes them a prey of the leucocytes; what are the conditions that allow bacteria to be affected by opsonins? If Wright's conceptions were true, bactericidal and other reactive products would be useless; if phagocytosis would be the main source of the elimination of virus, the organism would not have gone to the trouble of adapting itself to so many varying reactive processes. The final outcome of the opsonin study will be the elucidation of these questions; it is liable to show that opsonins are nothing but substances, or qualities, of the blood

facilitating the elimination of bacteria and other obnoxious foreign bodies, that by the action of other and well-known and studied agents have already been made innocuous and form, at the time when they are taken up by the leucocytes, waste material. The further study of opsonins will at least decide the meaning of phagocytosis, whether a primary activity or only a secondary process.

THE ELECTRICAL CHARGE OF TOXIN AND ANTI-TOXIN.—Cyrus W. Field and Oscar Teague (*The Jour. of Experim. Med.*, Vol. 9, No. 1.)—By a very ingenious method the authors have been able to decide whether the toxin and anti-toxin particles were possessed by an electro-positive or electro-negative charge. The attempts to achieve this, made before by Bolton and Pease, and by Roemer, remained resultless on account of the electrolysis (acid reaction of the solvents) produced by the strong current used. Field and Teague eliminated this obstacle by their modification of the older methods. They have determined that both diphtheria and tetanus toxin and their anti-toxins are electro-positive, that is, they pass to the cathode under the influence of an electric current. The character of the charge is not changed by an alteration of the reaction of the solvent. The combination of toxin and anti-toxin would, therefore, seem to represent not a true chemical reaction, but the absorption of one colloid by another. If these observations are confirmed and obtain for other immunity-reactions in the same way, it would be the first positive evidence against the chemical character of the combination, so far held after Ehrlich's theory, and even by physical chemistry.

EXPERIMENTS ON THE LEUKOLYTIC ACTION OF THE BLOOD-SERUM OF CASES OF LEUKAEMIA TREATED WITH X-RAY AND THE INJECTION OF HUMAN LEUKOLYTIC SERUM IN THE CASE OF LEUKAEMIA.—J. A. Capps and J. F. Smith (*The Jour. of Exp. Med.*, Vol. 9, No. 1.)—The experiments made by the authors on several cases of leukaemia (mostly lymphatic) resulted in the following conclusions: 1. The x-ray produces in leukaemia a disintegration of the leucocytes affecting especially the young forms, viz., the myelocytes and the nongranular, mononuclear cells. A similar action, but one of less degree, takes place in leukaemic blood exposed to x-ray in vitro. 2. The serum of a leukaemic patient who has improved under the x-ray treatment, when injected into animals, causes leucopenia; when added in the hanging drops to the leucocytes of another individual it disintegrates the cells. The strength of the leukolytic action seems to be proportional to the degree of clinical improvement of the patient under the x-ray treatment. 3. The serum of a case of leukaemia which has been exposed to x-ray has a marked agglutinating action on normal red corpuscles and on other corpuscles. The degree of agglutination varies roughly with the degree of leukolysis present. 4. X-ray treatment of normal or leukaemic blood in vitro does not materially alter the phagocytic power of the leucocytes. 5. The injection of a strong leukolytic serum from a patient suffering from lymphatic leukaemia under x-ray treatment into another individual with lymphatic leukaemia, not under the treatment, causes a decided and rapid fall

in the number of leucocytes. The mononuclear cells were principally affected. With repeated injections a partial immunity was established.

Leukolysin is probably formed by the destruction of leukocytes by the x-ray. This action is seen in experiments with leukaemic blood in test tubes exposed to the x-ray, where both the disintegration of the leucocytes and the formation of leukolytic serum can be demonstrated. In the living subject the leucocytes in the circulating blood and spleen may alone be the source of leukolysis; or this function may be shared by the lymphoid cells of the glands and spleen. The latter seems to be more probable, because the formation of leukolysin and evidences of leucocyte destruction are made more marked after exposure of the spleen and glands to the x-ray, than after an exposure of the blood in the test tube. Moreover we know that lymphoid cells, like the leucocytes, are susceptible to x-ray. The nature of this leukolysin remains in doubt. It may be an amboceptor-complement complex or a true toxine.

The study is very interesting and it is unfortunate that the authors did not proceed to establish more details about the physical and chemical nature of this leukolysin. From the natural and normal destruction going on in normal blood it appears to be rather a lytic quantity within the fluid, than due to the products of leucocyte disintegration. Perhaps the x-rays simply enhance this quality.

THE INFECTION OF MAN WITH BOVINE TUBERCLE BACILLI.—A. Weber (*Deutsch. Med. Woch.*, 1906. No. 49.)—This paper by Weber, a member of the German Imperial Health Office, is mentioned here to be recommended as worthy of being read by everyone interested in the relation of bovine tuberculosis to the human disease. The material known so far about this subject is summarized here in an objective and critical way, and represents in fact the sum total of our knowledge up to date. The paper is an impartial consideration and interpretation of the acknowledged facts, and the sum of it is drawn with no undue attempts to prove the one or the other side. The knowledge that bovine bacilli only in exceptional cases cause a human tuberculosis, although local infections, not followed by dissemination, are not so rare occurrences, has during the past two years commenced to penetrate deeper and deeper in our dealing with the human disease. The few exceptions do not play any part in the general measures to be adopted for the elimination of the disease. The latter have only to deal with the human bacillus. That nevertheless, on general principles, the slight danger menacing the human race through the bovine virus, must not be altogether lost sight of, is also the opinion of Weber, and to a degree one can consent to it. With the general endeavor for pure food and hygienic conditions, the products of cattle must be watched as others, aside from the great financial importance, that the ravages of the disease in these animals have on the wealth of the country. While the apprehension of danger from infection with bovine virus must be subdued, the elimination of bovine tuberculosis is a problem, that indirectly belongs to our plans of improving the modes of life. Weber's paper will direct the thoughts of the reader in this direction.

CONTRIBUTION TO THE EFFECT OF INTRAVENOUS INJECTION OF SUPRARENIN ON THE AORTA OF RABBITS.—C. Kaiserling (*Berl. Klin. Woch.*, 1907. No. 2.)—On the basis of eight experiments on rabbits, injected intravenously for 1 to 44 days daily with suprarenin, Kaiserling expresses doubt of the specific character of the aortic lesions found by a number of observers after the same method. The only changes of the vascular system he could discover were a more or less pronounced dilatation of the right ventricle, stasis in the larger veins, and edema and hemorrhages within the lungs. The beginning aorta never showed any changes. This negative result, obtained under conditions identical with those under which others had in the majority of cases positive findings, suggests to the author that the lesions, formed by them are not proven to be the specific effect of the suprarenin injections. The fact that he himself has found at the autopsy of a rabbit not treated with suprarenin the lesions described as suprarenin lesions, and further, that Erb has reported a case where, after only one injection, these changes were found, leads him to think that calcareous changes of the aorta in rabbits may naturally occur more frequently, perhaps dependent upon the character of food they are given, or upon the race that is used. He suggests an investigation of the following questions: in what percentage of normal rabbits are calcareous changes of the aorta found; are they related to age; race or way of life; why does the suprarenin effect only occur with intravenous injection, not by subcutaneous; are other methods of increasing blood-pressure of a similar effect; and what is the behavior of other animals? From the uniformity of the reports made of successful experiments, Kaiserling's observations are very startling and ought to be a suggestion of careful autopsy examination of every rabbit dying naturally, or from the effect of experimental procedures.

DIAGNOSIS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

FUNCTIONAL RENAL DIAGNOSIS.—GRUENWALD (*Deutsch. Arch. f. klin. Med.*, Vol. 88, No. 1-3).—The writer's researches were directed towards the attempt to answer the question whether a radical difference exists between the behavior of the kidney in chronic interstitial and in parenchymatous nephritis. It was found that such a difference does exist in the reaction of the kidneys towards diuretics and towards the ingestion of considerable amounts of water and of saline solutions. Whereas, the kidneys in parenchymatous nephritis behave towards these agents approximately like the normal kidneys, the polyuria of interstitial nephritis is affected not at all, the specific gravity hardly at all. This offers a ready means of distinguishing between the two forms and suggests the possibility of influencing the former condition by means of an efficient therapy, whereas the latter condition will probably always remain refractory.

THE PERCUSSION OF THE TRUE CARDIAC BOUNDARIES.—Moritz, Dietlen. (Ibid.)—In Moritz's clinic the following technique is used in percussing out the heart. In determining the right border the plessimeter finger is pressed firmly against the thorax and loud percussion is used. If one begins in the right mammillary line and proceeds towards the heart, a distinct change in the note is observed before the right sternal border is reached. This is still more marked if, after a deep inspiration, the patient is made to expire forcibly, the thorax being still further compressed by the observer's finger. The left cardiac border is best determined by means of gentle percussion during inspiration. The results so obtained coincide well with the x-ray findings. By the ordinary methods, as is well known, we do not determine the true cardiac boundaries, but only the size of that portion of the heart not covered by lung-tissue. Whether the above method is superior to Ebstein's palpatory percussion or to Goldscheider's method, described in the Interstate last year, remains to be seen.

DIFFERENTIAL DIAGNOSIS BETWEEN RENAL DISEASE AND PERITYPHLITIS.—Schlesinger. (*Deutsch. Med. Wochenschr.*, 1906, No. 44).—Some instructive findings resulted from the observation of a number of cases in Israel's clinic. Red blood corpuscles may appear in the urine of perityphlitis and may be absent in nephrolithiasis when there is an incarcerated ureteral calculus. Pain radiating into buttocks, hips and legs is due to an extra-peritoneal lesion and therefore suggests a renal origin. But the appendix, too, may be extra-peritoneal and may then produce the same phenomenon. Violent pain radiating into testicles and penis speaks for disease of the urinary tract, but bladder disturbances were found sometimes to be due to perityphlitis. Finally, cases of renal colic were observed closely simulating ileus.

THE DIAZO-REACTION IN PULMONARY TUBERCULOSIS.—Weiss (*Wein. klin. Wochenschr.*, 1906, No. 44).—The writer greatly prefers the use of paramidoacetphenon in this test to that of sulphanilic acid. Care must be taken to use only one drop of the one-half per cent solution of sodium nitrite, as any but the most outspokenly positive test may otherwise result negatively. He finds that a positive diazo-reaction in pulmonary tuberculosis indicates an unfavorable prognosis, but only if it is constantly present.

RUSSO'S METHYLENE BLUE TEST IN TYPHOID FEVER.—Rolleston (*Report of the Metrop. Asyl. B'd.*, 1906; *Abstr. in Munch. med. Wochenschr.*, 1906, No. 48).—Russo's test consists in the addition of a few drops of a dilute (1:1000) aqueous solution of methylene blue to a little urine. A green color indicates a positive reaction. The writer found it positive in 44 out of 54 cases of typhoid fever. Of the 10 cases in which it was negative, all but 2 were very light. It is occasionally positive in gastric cancer, pneumonia, scarlet fever and septic endocarditis. He believes it to be of greater diagnostic value in typhoid fever than the diazo-reaction.

EARLY DIAGNOSIS OF GASTRIC CANCER.—Albu (*Deutsch. med. Wochenschr.*, 1906, No. 52).—Successful surgical intervention in gastric cancer

is to be expected only very early in the disease, practically never after a tumor is palpable. For the purpose of an early diagnosis, Albu lays great stress upon a progressive, even though slight, loss of weight. All patients, in whom the possibility of a gastric cancer need be considered, should be placed upon a plentiful easily digested diet, which is best given in frequent, small meals. They should be weighed at weekly intervals and if, in spite of a plentiful, apparently well digested nourishment, there is a progressive loss of weight, a carcinoma should be suspected and an exploratory laparotomy seriously considered. If the motility of the stomach is nearly normal, but the hydrochloric acid is absent or nearly so, the food poorly digested and traces of blood pigment are present, the cancer is situated in the fundus. If, on the other hand, the stomach contents are chemically normal or superacid but a considerable degree of diminished motility can be made out, a pyloric cancer may be inferred. In the latter case, repeated examinations of the gastric contents should be made. A steady decline in the degree of gastric acidity will be observed.

He reports two cases of extreme interest. In one case, the patient complained only of epigastric pain independent of taking food. The stomach contents contained a little mucus and no free HCl. The patient was put on a plentiful, nutritious diet, but nevertheless lost $6\frac{1}{4}$ lbs. in $4\frac{1}{2}$ weeks. At the operation, a flat tumor at the fundus an inch in diameter was found and could be radically excised. It was not palpable, even in narcosis. The other case presented symptoms pointing to hyperacidity. The first examination revealed gastric atony with hypersecretion of HCl. In subsequent examinations the former increased, whereas the latter grew less. The patient, moreover, in spite of adequate nourishment, lost 10 lbs. in 4 months. At the operation a tumor, the size of a walnut, growing on the basis of an ulcer scar, was found. Again complete resection of the mass was possible. Such triumphs of diagnosis are attainable only where the patients have been continuously observed in the most painstaking manner.

THERAPEUTICS.

IN CHARGE OF

W. M. ENGELBACH, M. D.

This department, during the following year, will attempt to classify the new material in therapy as follows: (1) The important literature will be extracted and kept as nearly up-to-date as possible. (2) The new and non-official remedies accepted by the Council of Pharmacy and Chemistry of the American Medical Association will be given space. (3) Medical legislation, which is at the present time in such an important stage of development with regard to therapy, will be briefly outlined. (4) Standard prescriptions of recognized worth will be added to each month's review. (5) Reviews of books on this subject will be found under that special heading.

THE ANTI-TOXIN TREATMENT OF TERTIAN MALARIAL INFECTIONS.—Ford (*Jl. Am. Med. Assn. Vol. XLVIII, No. 2, page 133*).—The serum treatment of malaria has been attempted by the author once before. In the first series the anti-toxin was developed by inoculating rabbits with the defibrinated blood of patients harboring the parasite of tertian malaria or by the bites of mosquitos infected with that protozoon. In the present series the animals employed were monkeys (*Cynomolgus Mendinensis*) and goats. The former animals gave the more satisfactory results. In 34 days the animal which was selected for the production of the serum received four inoculations, each consisting of two cc. of defibrinated human blood containing the tertian plasmodia. Ford, in this article, cites the experiments of a series of inoculations made on humans, two of which were colored and five white, each of whom received one cc. of the defibrinated blood containing the plasmodia. All the white patients developed malaria in from nine to forty days. Neither of the colored patients developed the disease, although one had had an attack the preceding autumn. These human inoculations were in marked contrast with those of animals which failed to show the plasmodia after inoculation. From 21 inoculations he draws the following conclusions: The successive inoculation of monkeys or goats with blood containing the plasmodia vivax (tertian) gives rise in those animals to an anti-toxin which when injected in adequate doses into human beings may be followed by disappearance of parasites from the circulation and the disappearance of the symptoms of malaria. This agent has no apparent influence on infections caused by other varieties of the malarial parasite. From these results it is suggested that a serum for yellow fever may be discovered along similar lines of investigation. It is believed that an anti-toxin against malaria will develop to be of practical value as a prophylactic measure, if not also a curative agent.

ROENTGEN RAY TREATMENT OF LEUKEMIA.—MARAGLIANO (*Gazetta Degli Ospedali, Vol. XXVII, No. 132*).—The spleen and the glands in the neck were exposed; the bones were not exposed. Glands distant from the exposure decreased in size. This occurred before there was any change in the blood findings. The benefit derived in these cases persisted for a year and a half. Maragliano thinks by exposing larger areas,—especially the neck, in addition to the exposure of the spleen,—more rapid results would be possible than have hitherto been supposed. The curative process, he attributes to a kind of auto-serotherapy. By filtering the rays through diachylon he eliminates the non-penetrating rays which are liable to affect the skin injuriously. This allows a more copious use of the curative rays.

THE TREATMENT OF CHRONIC INTESTINAL CATARRH.—ROSENHEIM (*Deutsche Med. Wochenschr, 1906, No. 25*).—The symptoms and the etiology of the different varieties of the processes causing intestinal catarrh are given by the author. The treatment is divided into that of enteritis, enterocolitis, and colitis. He recommends the following for enteritis: Depending upon whether there is putrefaction or fermentation the diet must be regulated accordingly. In general, the diet should be

non-irritating and easily absorbed. Secondary conditions (processes of the stomach and large intestine) which usually produce the vast majority of the symptoms must be treated according to the special indications. (2) For enterocolitis the diet should consist of richly albuminous material. When there is much co-existing inflammation of the large intestine, fruit and vegetables should be added in abundance. Fats should be given in the form of butter ($\frac{1}{4}$ pound per day), and oils also when these are well borne by the upper intestine. The medication recommended is tannocal, $\frac{1}{2}$ teaspoonful 2 or 3 times daily; bismuth sub-nitrate, calcium phosphate of each $7\frac{1}{2}$ to which can be added four grains of ex. belladonna. Knife point of this is taken after eating. (3) For hemorrhagic colitis a suspension of bismuth is especially recommended as a rectal injection. Mineral waters are only recommended for the mild forms. For the constitutional symptoms arsenic and iron, as it occurs in certain mineral waters, are given per rectum.

REGULIN TREATMENT OF CHRONIC HABITUAL CONSTIPATION.—SCHMIDT (*Munch. Med. Wochenschr.*, 1906, No. 30.)—Regulin is a 20 per cent extract of cascara in agar as used by Schmidt. Helfenberg, in 25 patients, obtained good results in 80 per cent with this treatment. He gave one to two teaspoonfuls in potato soup, or with apples, once daily without any change in the diet. As early as the third day after this, there resulted an easy soft stool; no discomfortable symptoms were observed. The treatment was stopped after 14 days, or the amount was decreased. The action of regulin is largely mechanical. It takes up 17 times its own volume of water and by this means produces a voluminous, soft stool.

REPORT ON THE SERUM TREATMENT OF HAY FEVER.—BORROWMAN (*Scottish Med. and Surg. Jl.*, 1906, No. 3.)—Borrowman reports the unfavorable results of Dunbar's "pollatin" on himself. This resulted in edema of the conjunctive and mucous membrane of the nose. He was apprehensive lest this edema might proceed to the glottis and thus cause a dangerous condition. It is needless to say that he discontinued the use and commendation of this form of therapy.

TREATMENT OF TUBERCULAR GLANDS OF THE NECK BY THE X-RAY.—FELDSTEIN (*N. Y. Med. Jl.*, January 5, 1907).—Feldstein concludes regarding this method of treatment as follows: (1) Glands should be treated by the x-ray if there is no softening or caseation. (2) Softened or caseous glands should be referred to the surgeon. (3) Post-operative x-ray treatment is important if there is any doubt of remaining glands which might be infected. (4) For cosmetic reasons the x-ray may be used. (5) The size of the glands does not influence the successful result of the treatment.

INTRAVENOUS INJECTIONS A THERAPY OF THE FUTURE.—HAHN (*Amer. Medicine*, December, 1906).—This exhaustive article includes the history, the development and the detailed technique of intravenous therapy. The author summarizes his conclusions as follows: "(1) Especially fitted

for intravenous treatment are 'dyscrasic' and dystrophic affections, disorders of metabolism, blood diseases, septic infections, cardiac insufficiency, syphilis. (2) Cinnamylic acid, quinin, sublimate, salicylates, the derivatives of digitalis, fibrolysin, arsenic and iron, collargol and formalin are the drugs so far used. (3) The advantages of the method are: (a) Avoidance of digestive and other troubles or by-effects, (b) exact dosage, (c) administration at greater intervals of time, (d) a more direct and therefore a more rapid action, (e) 'a more energetic effect, (f) relative painlessness when compared with hypodermic injections. (4) The technique is not easy. It has to be learned and carefully observed. (5) I believe that intravenous medication is exceedingly valuable in many conditions. While I am sure that it will have a certain future, I am no less sure that the oral administration of drugs will always remain the standard procedure."

AN ANALYSIS OF THE KIDNEY CONDITION OF 800 CASES OF SCARLET FEVER TREATED WITH ROUTINE DOSES OF CHLORAL-HYDRATE.—ROYER (*Therapeutic Gazette*, January 15, 1907).—The author by means of scientific comparison contrasts this method of treatment in 800 cases with 756 cases having the usual remedies. The following conclusions are drawn: (1) Chloral-hydrate is of distinct value in the treatment of scarlet fever, and when used in doses of sufficient size to secure light somnolence does not seem to be a circulatory depressant. (2) Chloral-hydrate ameliorates nervous symptoms better than any remedy yet suggested in the treatment of scarlatina. (3) Chloral hydrate allays the itching of the skin often found annoying in scarlet fever. (4) When chloral hydrate is given routinely during the febrile period and for some days thereafter, post-febrile nephritis appears to be less frequent. (5) This study would seem to justify the more extended use of chloral in the treatment of scarlet fever, and a more detailed study as to how it acts on the kidney itself.

SOME FACTS ABOUT DIGESTIVE FERMENTS.—SOLLMANN (*Journal of Amer. Med. Assn.*, February 9, 1907).—The author reviews the effects of the different digestive ferments and their actions and indications, especially as they are found combined in the various preparations on the market. He confirms the findings of previous writers that the different ferments are incompatible in combination thus becoming inert and not fulfilling the conditions for which they are given. He also convincingly demonstrates that the reaction of the different preparations would produce conditions in which these ferments could not act. From this confirmation absolute deductions are drawn showing the uselessness of almost all the preparations now so extensively recommended to the profession.

The following drugs have been tentatively accepted by the Council of Pharmacy and Chemistry of the American Medical Association:

Thiosinamine (.03 to .1 Gm., $\frac{1}{2}$ to $1\frac{1}{2}$ grains; subcutaneous injection .05 to .2 Gm., 1 to 5 grains in 15 per cent alcoholic solution, or 10 per cent glycerinated aqueous solution.) Action and uses: absorption of

exudates lymphatic swellings, and scar tissue. Indications: lupus, glandular tumors, scars, corneal opacity, chronic deafness. Triferrin (.3 Gm., 5 grains.) Action: that of iron and lecithin. Indications: anemia, chlorosis, neurasthenia, rhachitis, and general debility. Triferriol (16 cc. four fluid drams.) Action and indications: substitute for triferrin. Trikresol (liquid said to consist of 35 per cent orthocresol, 40 per cent metacresol, 25 per cent paracresol.) Trional (triolymethylene, internally .3 to 1. Gm., 5 to 15 grains; externally, 10 per cent suspension in collodion.) Tritipalm (48 cc., 1 to 2 fluid drams.) Triphenin (antipyretic .25 to .6 Gm., 4 to 10 grains. Antineuralgic 1. to 1.3 Gm., 15 to 20 grains.) Action: antipyretic, analgesic, and hypnotic. Action is slower and milder than phenacetin. Indications: typhoid, pneumonia, pleurisy, influenza, erysipelas, tuberculosis, neuralgia, sciatica, migraine, etc. Tropacocaine Hydrochloride (3 to 10 per cent aqueous solution.) Action: local anaesthetic. Tumenol (5 to 20 per cent ointment or 10 per cent solution in water, glycerine, or soap plaster. Action: non-toxic and non-irritant, protective and palliative to the skin. Indications: eczema, excoriations, erosions, ulcers, burns, etc. Tumenol Sulphone (undiluted for penciling.) Actions and indications: same as tumenol. Tumenol Sulphonic Acid (powder 5 to 10 per cent, paste without zinc oxide in 2 to 5 per cent aqueous solution.) Actions and indications: same as tumenol. Tusol (.05 to .5 Gm., $\frac{1}{2}$ to 8 grains.) Action: antipyretic analgesic with a stimulating action of mandelic acid. Indications: whooping-cough. Urethane. Uriform (48 cc., 1 to 2 fluid drams.) Uritone. Uropherin-B (.3 to 1 gram, 5 to 15 grains.) Action: diuretic. Indications: dropsy, nephritis, diseases of the heart, and genito-urinary organs. Uropherin-S (same as Uropherin-B.) Urotropine. Urotropine-New. Valyl (.125 Gm., 2 grains in gelatin capsules, 2 to 3 capsules with or after meals.) Action: sedative, anti-spasmodic, nervine. Indications: neuroses, neuralgia, menstrual irregularities, insomnia, etc. Veronal (.3 to 1 Gm., 5 to 15 grains.) Action: hypnotic. Indications: neuroses, and mental disturbances. Vibutero (8 cc., 2 fluid drams.) Vinum Extracti Morrhuae (15 cc., 4 fluid drams.) Action and indications: substitute for codliver oil. Xeroform (1 to 3 Gm., 15 to 45 grains per day for adults; .12 to .3 Gm., 2 to 5 grains for child; externally as a dusting powder.) Action: non-irritant, non-toxic, antiseptic. Indications: ulcer cruris, eczema, gastrointestinal catarrh, proctitis, dysentery, diarrhea, cholera-infantum, etc. Adnephren Suppositories. Albargin (.2 Gm., 3 grain tablets.) Actions and uses: substitute for silver nitrate. Alypin (10 per cent solution externally; 1 to 4 per cent solution hypodermically.) Action: local anaesthetic. Anthrasol (5 to 10 per cent ointment, 10 per cent ointment with glycerite of starch, 20 to 30 per cent ointment or paste.) Action: antiseptic, parasiticide, keroplastic, antipruriginous. Indications: chronic or subacute skin diseases. Chloralamid (chloralformamidum U. S. P.) Collargol (15 per cent ointment, 2 to 5 per cent for intravenous injection, 1-50 to 1 per cent solution for washes, 5 per cent dusting powder, .2 Gm., 3 grains suppositories, .5 to 1 per cent for muscular injections. Internally a teaspoonful of 1:500, 1:100 solution or .06 Gm., 1 grain tablet.) Action:

antiseptic and germicide. Indications: general conditions requiring this action internally or externally. Collargol Ointment (*ungeuntem crede*) (2 to 4 Gm., 30 to 60 grains.) Cresylone (*liquor cresolis compositus U. S. P.*) Cupro-Hemol (.5 Gm., 8 grains.) Actions and indications: tuberculosis, scrofula, anemia, chlorosis. Euformol (greatly diluted.) Action and indications: germicide, antiseptic, deodorant, especially for excreta in infectious diseases. Exodin (.5 Gm., $7\frac{1}{2}$ grains for adult.) Action: cathartic. Indications: acute and chronic atonic constipation. Haemoferrum (4 to 8 cc., 1 to 2 fluid drams.) Iothion (25 to 50 per cent ointment.) Actions and indications: substitute for iodine and iodides as a local application.

PRESCRIPTIONS.

Twitty states that he has given the following method of treatment a very extensive and careful trial and has no hesitation in recommending it in incipient tuberculosis. The wide experience not only of himself but of other reputable physicians has put this method of treatment beyond the experimental stage. The following is the original prescription:

R. Iodi, gr. x-xxx .60 to 2. Gm.

Carbonei disulphidi 1 fluid ounce, 30.

Five drops on gauze in an antiseptic inhaler. Inhale through mouth and exhale through nostrils from three to five minutes, slowly at first. Repeat from three to six times a day. It is needless to add that this measure is merely an adjunct to the other treatment.

SURGERY.

IN CHARGE OF

M. B. CLOPTON, M. D.

NEW METHOD OF JEJUNOSTOMY.—L. CHEVIER (*Gaz. des Hopitaux*, Jan. 10, 1907).—In an article, dealing only with the technique of the operation, is described and well illustrated a trans-omental operation, with a vertical suspension of the jejunum, and the formation of two transverse folds in the gut wall, which, together with a sphincter formed from the rectus, gives an opening that does not leak and yet allows the passage of the duodenal contents. A 10 centimeter incision is made 2 centimeters to the left of the median line, with its middle opposite the umbilicus. The great omentum is divided and the jejunum is picked up about 30 centimeters below the end of the duodenum. Beginning 2 centimeters from the mesenteric attachment on either side a transverse fold about 2 centimeters deep is turned in with fine silk. This fold is turned in above and below the intended point of opening. Two traction sutures are then placed on either side of the intended opening and after the gut has been stitched in the peritoneal opening, these traction sutures are crossed over and brought out behind narrow strips of the rectus muscle and when the skin is finally closed these traction sutures are drawn snugly and anchored.

thus throwing the strips of rectus muscle to the opposite side of the wound and forming the sphincter. Several days later, after healing of the parts, the opening in the gut is made with the thermo-cautery.

ACUTE UNILATERAL SEPTIC PYELONEPHRITIS.—DAN'L N. EISENDRATH (*Am. Jour. of the Med. Sc.*, Jan., 1907).—A Class of cases of unilateral involvement of the kidneys of various types, either an ascending catarrhal pyelonephritis, or multiple miliary foci of suppuration, or a hyperacute form where the disease is so rapid that there is no time for the formation of foci, or more rarely a few large abscess cavities, or a gangrene of the pelvis and parenchyma, are now recognized and demand surgical interference. The infection comes from the urine or from the blood, in the first instance most frequently ascending from a cystitis, or an unclean ureteral catheterization, or the infection begins in cases of hydronephrosis or lithiasis. When the infection comes through the blood it is most frequent after a subcutaneous injury to the kidneys, or in children as a result of the catarrhal condition of the intestines or a stagnation of the fecal current. Septic emboli in the parenchyma are likely to follow acute infectious disease, or suppurative processes in any part of the body. Pain, tenderness and rigidity over the kidney, pyuria, renal colic, chills, fever, occasionally anuria, either with or without previous history of calculus, are the most characteristic symptoms. Urinary antiseptics, with large amounts of milk and water, may succeed in the milder cases. The bladder should be irrigated with weak silver nitrate solution, but never catheterize the ureters on account of the danger of infection. Nephrotomy, with the opening of the various infected points, will suffice in some cases, but the severe form will demand the removal of the kidney. Thirty-four cases of nephrotomy with 28 recoveries, and 27 cases of nephrectomy with 25 recoveries, are found in the literature.

INCOMPLETE OCCLUSION OF THE ABDOMINAL AND THORACIC AORTA BY METAL BANDS.—HALSTED (*Jour. Am. Med. Ass.*, Dec. 29, 1906).—An aluminum band is used which can be manipulated either by an instrument or by the fingers to encircle a vessel, either completely or partially occluding the lumen. The bands were used experimentally on 100 dogs, and it was shown that the blood pressure below the band varied with the amount of occlusion. Partially occluding bands produce no macroscopic change in the vessel wall even after months, but when the lumen is almost but not occluded, complete occlusion may result spontaneously, and gives the ideal closure of an artery. In about three months after operation, a large extra-dural deposit of fat was noted in the spinal cord below the site of occlusion of the aorta. Partial occlusion of the large vessels can be used as a cure for aneurism. Dr. Halsted has successfully used the metal bands in the human subject, once to partially occlude the innominate, the common carotid four times, and once to completely occlude the femoral. The use of ligatures in large vessels is usually followed by cutting through and secondary hemorrhage.

A NEW METHOD OF CLOSURE IN ANASTOMOSING THE INTESTINES.—FLINT (*Archiv. f. Klin. Chir.* B. 80, Heft 4).—The method is used in

lateral anastomosis of either the stomach to small intestine, or intestine to intestine. After the closure of the ends of the gut the two pieces of gut are laid side by side and a running or interrupted suture is placed as for any lateral anastomosis. An instrument devised by the author, called a needle pointed scissor, is then used. It varies in length from 16 centimeters to 25 centimeters, and consists of two arms, one 10 centimeters longer than the other, pivoted at one end, the parts nearest the pivot being sharpened like scissors and tapering to the ends like heavy needles. The long arm is introduced into the lumen of the gut, carried along it and emerges, including between these two points the subsequent line of incision in the bowel. The other shorter arm is in the same way introduced into the other bowel. The ends of the needles which have been soiled by the intestinal contents are then covered with rubber tubing, and using the instrument as a fixation appliance the front row of suturing is continued, leaving, however, at either end two sutures that are not tied. The instrument is then slipped along in the gut until the scissor edges are opposite the intervening gut walls, and the gut is divided by closing the instrument tightly. The instrument is then withdrawn backwards, and the end sutures tied. In the fact that the peritoneum is not soiled with intestinal contents he finds that the sutures are not irritated, and there is little or no scar tissue. It offers a rapid method, which has the advantage of an immediate bowel opening. There is no hemorrhage, the author claims, and the suture is particularly strong. He has used it experimentally very many times without a single failure. It was devised and used before Werelins described his method and Flint says that it has an advantage over the string method, because he found an occasional hemorrhage after Werelins' plan.

A NEW METHOD OF LATERAL ANASTOMOSIS.—WERELINS (*Surg. Gynec. and Obstet.*, Vol. 11, No. 3).—The guts are sutured along the anastomotic line and then a silk twine or silver wire suture is introduced as in the McGraw ligature, and the anterior line of suture is done, leaving one end of the suturing loose. The guts are held firmly by an assistant and by alternately pulling the right and left ends of the silk, or silver wire ligature, the tissues are cut through and an anastomotic opening made. The beginning and end of the suture thread are then tied and the operation is over. The technique is simple and fast, no chance for infection, no shock, no puckering of tissue, no foreign body, and the operation is complete at once. He has used it successfully five times in humans, many times in dogs, and never has seen hemorrhage. He has never seen the cutting thread run into the suture line; while the cutting thread may break it seldom does, and this objection could overcome by using silver wire, or introducing two cutting threads and using only one, unless it breaks.

EARLY OPERATION IN CASES OF INTRACRANIAL INJURY.—CHARLES PHELPS (*Annals of Surgery*, Dec., 1906).—It is evident that operative interference in intracranial injury is practiced too often without due consideration of the probable nature of the lesion, and prolonged unconsciousness is regarded by some as a sole and sufficient reason for entering the cranium. Unconsciousness, as a diagnostic and operative indica-

tion would be invaluable, provided the earlier history of the case could be obtained, which is most frequently impossible. The main symptom to be studied to interpret unconsciousness is temperature. Immediate unconsciousness after a cephalic injury is due to diffuse contusion, if preceded by a conscious interval, although brief, or a conscious stage intervenes before deep unconsciousness, there is some form of intracranial hemorrhage. Several hours of unconsciousness with a stationary temperature one or two degrees above normal, means a fairly profuse hemorrhage without serious brain injury, but a higher temperature, which increases with possible recessions, points to a visceral lesion. The basic distinction is between epidural and subdural lesions. Explore the soft parts, or elevate the bone if it is depressed. A linear fracture with associated deeper lesions, demands further consideration. Meningeal contusion occasions hemorrhages which are included by some within operative sphere. Cerebral contusion is manifest by hyperemia and edema of the brain, either localized or diffuse. Meningeal contusion is intermediate between epidural and cerebral lesion, not only topographically, but in symptomatology and diagnosis, and if operation is proposed, in prognosis. Subdural hemorrhages, if too large to be confined in the pia, spread over large or small cerebral areas, and are complicated by cerebral lesions which afford the dominant symptoms. If cranial fracture can be excluded it is probable, in the proportion of six to one, that the hemorrhage is subdural, and if cerebral symptoms are not prominent that it is pial rather than cortical. By statistics it is shown impossible to diagnose between an epidural and pial hemorrhage. A hemorrhage can be only indirectly located. Lesions of the brain itself give symptoms of disorders of mind, pulse, temperature and respiration, muscular system, sensation, loss of urinary and fecal control, occasional disorders of special senses, and variations of size and reaction of pupils. The loss of consciousness is common in all forms of intracranial injury, and is the only effect which directly results from either of the superficial hemorrhages. Delirium is always a symptom of complicating cerebral injury. Hemiplegias, in basal fractures are the results of hemorrhage. The question of operation is largely one of diagnosis, which is difficult, and what the operation may be expected to accomplish and is it practicable and will it improve the patient's chances? In easy operations for epidural hemorrhage the object is to remove pressure, and is without risk. The longer the cerebral compression lasts, the more probable the damage to the cerebral cellular elements will be permanent, so if it is decided to operate no delay should follow. If coma deepens, temperature declines and pulse weakens, the hemorrhage is continuing and the only hope is to reach and check it as its source. In many rapidly recovering cases, or fast declining ones, the question of operation will not rise, but a considerable number with severe symptoms remain stationary, or improve only slowly, and these are the cases hard to decide. Subdural injuries are always severe and operative interference is attended with great risk from shock, sepsis, hemorrhage and cerebral hernia, and there is the greatest uncertainty of the advisability of operation, and what might reasonably be accomplished by an operation. Lacerations of the brain, or severe general contusions offer little or no hope of operative relief, and limited contusion can never suggest operation. General hyperemia and

edema is a direct cause of death in most cases, and only a very small proportion of cases are amenable to the operative relief of intracranial pressure. Some cases of cerebral contusion show such severity that they never suggest operation, and experience teaches that they are destined to die no matter how treated. In 1,000 cases there is not a single instance where the temperature passes 105° that the patient recovered. In cerebral contusion complicated with pial or epidural hemorrhage, operation should depend on the relative importance of the lesion.

ORTHOPEDIC SURGERY.

IN CHARGE OF

NATHANIEL ALLISON, M. D.

TREATMENT OF TUBERCULOUS ABSCESES.—Starr (*Brit. Med. Jour.*, 1906, ii., 923.)—The abscesses which follow tuberculous disease of the bone add no danger to the local or general condition, so long as they remain quiescent, as closed sacs, and do not become infected. A considerable proportion of these abscesses will disappear where proper treatment is instituted for the relief of the bone condition. Where the abscess is allowed to open of itself, it invariably becomes infected with septic organisms. If such an abscess burrows too close to the skin, infection may arise from organisms that gain entrance through hair follicles or sweat glands; or the skin may become invaded with tuberculous disease. The treatment of these abscesses may be undertaken in several ways. The author advises against aspiration, also against the injection of germicidal agents into the abscess cavity. The excision of the sac entire is usually out of the question, unless the abscess be small and quite accessible to such procedure. Treatment by incision and drainage results in a long continued discharging sinus, which often endangers the life of the patient. Incision, evacuation of the contents, curetting of the walls of the abscess cavity, and complete closure of the wound, done under the most aseptic technique, affords the treatment of choice. The author reports 55 cases so treated, only 7 of which afterwards broke down, while the remaining 48 were permanently closed, after periods varying from four months to six years. Five of the cases required a second evacuation of contents, and one case a third.

BIER'S TREATMENT IN TUBERCULOSIS AND ACUTE INFECTIONS.—Aufret (*Rev. d'Orthopédie*, 1906, 481.)—Congestion of the affected part is the object of the three different modes of treatment employed by Bier to the very diverse conditions of infection, acute and chronic, and non-infectious troubles. These three modes of treatment are: Hot baking, compression by the elastic bandage, and aspiration with cupping-glasses, or a surgical apparatus. For non-infectious conditions, he advises hot baking and aspiration, in such conditions as chronic rheumatism, arthritis deformans and old edemas. The cupping apparatus should be used on local infections, where pus has already been formed, particularly

in mammary abscess, buboes, furuncles and lymphatic glandular abscesses. The elastic bandage has an anodyne effect upon the extreme pain characterizing gonorrheal arthritis. It is also to be employed in acute arthritis, early metastatic foci and infected wounds. In the presence of grave suppuration, the first indication is to make a free incision for the escape of the pus. The elastic bandage here facilitates the escape of pus after incision, and permits, in many cases, the early stoppage of packing and drainage.

ON COXA VALGA.—B. Galeazzi (*Amer. Jour. Orth. Surg.*, Jan., 1907.)—Although recent clinical researches have confirmed us in our opinion that anomalies in the direction of the femoral neck are but the anatomical results of affections of a different nature, the abnormality of angulation called coxo valga is a condition concerning which little is known. Leaving out the cases due to traumatic origin, or those following paralysis, rickets, or congenital dislocation of the hip, the author claims the distinction of reporting the first case not accompanied by these lesions, to which this cervical anomaly pertains. He makes two observations and verifies them with x-ray photographs. He believes that we cannot consider coxa valga as a static deformity, but that these anomalies in the shape and direction of the femoral neck have their origin in functional disorders in the process of osteology of the femoral head. The symptoms were as follows: pain in the region of the hip-joint, which increased after prolonged rest, and disappeared during dorsal decubitus; real lengthening of the leg, and the apex of the tuberosity of the great trochanter, below the line of Roser-Nelaton. There is a characteristic gait in walking, due to the obliquity of the trunk and the outer rotation of the leg. The patient is inclined to hold the trunk towards the side of the coxa valga. The causes of these symptoms are that the line of gravity does not pass normally through the femur, as the patient walks or stands. In both cases reported, the author practiced osteotomy under the periosteum of the femoral neck at the spot of its insertion in the shaft. The normal angle between the neck and shaft was then re-established. Both cases resulted favorably.

AN EXPERIMENTAL STUDY OF THE INFLUENCE OF NECROSIS, PRODUCED BY SUTURES, IN TENDON-SUTURE AND TRANSPLANTATION.—David Silver (*Amer. Jour. Orth. Surg.*, Jan., 1907.)—The first requirement of any method of suture is that it afford sufficient strength to maintain apposition during the process of repair; second, that it shall not exert sufficient tension to produce necrosis. In order to determine, if possible, what the real danger of necrosis is, three series of experiments were performed on rabbits. The technique in all cases was similar. The skin over the outer aspect of the legs was thoroughly cleansed. The tendo Achillis was exposed and subjected, after division, to suture, in order to determine, first, the degree of necrosis of tendon-tissue, produced by sutures, tied under the highest tension possible; to determine the degree of necrosis of tendon-tissue, under the highest tension of suture, the tendon not being divided; to determine the same facts where the tendon was grafted into another tendon. The author concludes that the yielding of

tendon in tendon-suture and transplantation, through necrosis produced by overtight sutures, must occur, if at all, very rarely when the sutures are tied under ordinary tension; that the failure of sutures through insufficient hold is fairly common; that the process of repair is slower in tendon-transplantation than in tendon-suture and tenotomy, due to interference with circulation and defects in the synovial sheath. Care should be taken, therefore, not to separate the tendon from surrounding tissue to any greater extent than is absolutely necessary.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

THE RADIO-THERAPEUTIC TREATMENT OF HYPERTROPHY OF THE PROSTATE.—Tansard and Fleig (*Ann. des Mal. des Org. Urin.*, Dec. 15, 1906.)—Two cases of prostatic hypertrophy are reported in which improvement followed the use of the Roentgen ray. The authors state that decided amelioration takes place from the radiotherapy in hypertrophied prostates through atrophy of the gland. As the perineal region, which appears to be the best point for applying the rays, is very sensitive to them, the irradiations should be very prudently conducted. The treatment by this means is especially indicated in prostatitis that have not reached the period of retention; in young prostatitis; in those who are dependent upon the catheter and are not obliged by reason of their social position to obtain a very rapid cure; in those with infected bladders; in the very aged; and in those with renal lesions.

PROSTATIC ALBUMEN AND ALBUMOSE.—Ballinger (*Southern Med. & Surgery*, December, 1906.)—The presence of albumen and albumose in the urine voided after massage of the prostate, when the urine before massage is normal, is as reliable in the diagnosis of prostatitis or an abscess draining into the urethra, as renal albumin is in the diagnosis of kidney disease. Their presence was constantly found in thirty patients with inflamed prostates. The test was negative in eighteen patients with healthy prostates and vesicles. The recognition of this prostatic and vesicular proteid affords a very simple method of making a positive diagnosis of marked prostatitis and vesiculitis, as well as the mild, obscure cases, whether a microscope be at hand or not. Owing to the alkalinity of the prostatic secretion and to the fact that deuterio albumose, the proteid constantly found in chronic cases, is not precipitated by boiling, the heat test as ordinarily applied will not be satisfactory, as many times no cloudiness will appear in the part of the urine boiled. Picric and citric acid will, however, produce a cloudiness, or precipitate, if added to the boiling urine and allowed to stand until cool. This will disappear again when heated if due to albumose.

Robert's solution as modified by Boston, containing one part of nitric acid to ten parts of a saturated solution of magnesium sulphate, applied

as a layer test, will demonstrate very small quantities of albumen or albumose. The writer believes that spermatorrhea, instead of being a neurosis, as most authorities claim, is due to a patulous condition of the seminal ducts and is really caused by a low grade inflammation of the seminal vesicles and ampullations of the vasa deferentia.

The inflammation causes an increase in the secretion and this mechanically washes out the spermatozoa when expressed by muscular exertion or otherwise.

DRAINAGE OF THE PREVESICAL SPACE THROUGH THE PERINEUM IN SUPRAPUBIC CYSTOTOMY.—Belfield (*Annals of Surgery*, Jan. 1907.)—Suprapubic cystotomy admittedly affords the best access for intravesical operations, and when primary union of the incision is secured leaves nothing to be desired. Usually primary union is not secured and leakage into the prevesical space commonly occurs in spite of all efforts to avert it, inviting infection, sepsis, pneumonia, and compels prolonged confinement to bed. To overcome this the author suggests drainage of the prevesical space into the perineum. When ready to close the wound the membranous urethra is opened on a grooved staff; the gorget introduced and staff withdrawn. A small trocar and canula is passed from above along the anterior surface of the bladder and prostate into the groove of the gorget. The trocar being withdrawn a few silkworm strands are threaded through the canula and along the gorget out through the perineal wound. A large, soft catheter is introduced into the bladder for perineal drainage, the suprapubic incision, bladder and abdominal wall are completely closed except where the threads protrude, the anterior bladder wall being anchored near the recti muscles. Any urine which may leak through the bladder wound and tissue fluids find ready exit at the bottom of this space.

DRAINAGE OF PROSTATIC ABSCESSSES THROUGH THE ISCHIO-RECTAL FOSSA.—Lusk (*Annals of Surgery*, January, 1907.)—This operation is suggested for cases of prostatic abscesses which have not ruptured into the urethra and present a tense elastic tumor, bulging toward the rectum. It is not recommended for cases where the abscess is ruptured into the urethra, when the operation of perineal section would be undoubtedly indicated. As compared with simple drainage of a prostatic abscess by the anterior, perineal incision, going between the bowel and the urethra triangle, drainage by this diagonal, lateral incision and approach through the ischio-rectal fossa, seems to have the preference for the following reasons: The route is direct and easily accessible; no danger of injuring the rectum or urethra and the scar is smaller and latterly situated.

Details of the dissection necessary and the after-treatment in these cases are entered into by the writer.

CHRONIC URETHRITIS AND AN IMPROVED METHOD OF APPLYING MEDICATION TO THE URETHRA.—Gardner (*Medical Record*, December 22, 1906.)—The writer refers to the treatment of this condition in general, drawing attention especially to that of packing the urethra with gauze,

impregnated with various medications, and draws the following conclusions:

1. The worst complication that is likely to follow a chronic urethritis is a stricture, consequently this should be borne in mind during the entire treatment.

2. The pathology is essentially a chronic inflammation of the sub-epithelial tissue (and especially around the follicles,) which passes through two stages, that of infiltration and that of contraction.

3. All authorities agree that these soft, recent exudates may be absorbed before organization has set in. The most rational method of forestalling a stricture is by packing the urethra.

4. The medication is in close contact for hours with the follicles and depressions, where germs are protected from irrigations and injections. The exudate thrown out around these follicles is frequently the starting point of stricture.

5. No other treatment combines so many beneficial factors, i. e. dilatation, massage, medication uniformly applied to the entire membrane and depressions and for a considerable length of time.

PRESENT OPERATIVE NECESSITIES FOR THE CURE OF TUBERCULAR ORCHITIS.—Barnett (*Internat'l Jl. of Surg.*, January, 1907.)—After a resume of the literature in consideration of the subject, the author sums it up as follows:

1. To be sure of a cure, all that is infected with tuberculosis must be removed.

2. Primary invasion statistics are so variable that the operator should consider testicular tuberculosis primary, unless other foci be found that disprove the supposition.

3. The modes of infection are so many that the surgeon should be on his guard constantly. This is especially true as regards infection during the act of cohabitation.

4. The desexation "bug-bear" should be entirely removed from the patient's mind, and instead, encouragement should be given him for a continuation of his copulative power.

5. Injections of paraffine in the production of artificial testes are of value from a cosmetic standpoint, and also because of the great satisfaction they afford the patient. This procedure is entirely devoid of danger when properly done.

6. Operations, when indicated, should be immediate; followed by prophylactic and hygienic treatment until the maximum improvement is gained.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF

HUGO EHRENFEST, M. D.

SPONTANEOUS EXPULSION OF A CARCINOMATOUS UTERUS AFTER CAUTERIZATION WITH ZINC CHLORIDE.—Blau (*Zentralbl. f. Gyn.* No. 4, 1907.)—This article records a most uncommon and peculiar observation. A woman of 64 years was admitted to Chrobak's clinic in Vienna with a cervical carcinoma and a pyometra. After dilation of the cervix the retained pus escaped and for the next few days an attempt was made to stop the profuse secretion of pus from the large uterine cavity in order to reduce the risk of infection during the contemplated radical operation. Peroxid, tincture of iodine, brom-alcohol, etc., were used without effect. Therefore, finally, a strip of gauze soaked in a 30 per cent solution of zinc chloride was introduced into the uterus and left 14 hours. The purulent discharge continued in spite of further treatment, when on the eighth day after the application of the zinc chloride the writer saw a greyish necrotic mass lie in the vagina. It was carefully pulled out and found to be the whole uterus. The microscopic examination of the specimen showed the corporeal carcinoma and typical uterine wall, but no peritoneal cover. A few days later an examination was made. The finger entered above the vagina a small cavity, apparently lined with a smooth membrane through which intestinal loops could be distinctly palpated. The patient made an uninterrupted recovery, and two months later was still enjoying good health. It would seem that the demarcation of the necrotized uterus took place just below the peritoneal cover. Of course it can not be definitely stated whether this spontaneous elimination of the carcinomatous uterus means a total elimination of all cancerous tissue. A slight hardening felt in the parametria could possibly have been due to an inflammatory infiltration. The writer in this connection quotes a few cases recorded in literature in which cauterization with zinc chloride undoubtedly effected the complete necrosis and thus cure of cervical cancers. This observation of Blau is interesting and noteworthy in that it clearly demonstrates the advantages and the possible dangers of the use of zinc chloride in concentrated solutions.

THE OCCUPATION OF THE PREGNANT MOTHER AND DEVELOPMENT OF THE FETUS.—G. Merletti (*Wien. klin. therap. Woch.* 38, 1906.)—A normal development of the fetus guarantees greater resistance against the common causes of the high mortality and morbidity of early infancy. A harmful effect upon the development of the fetus and the normal progress of pregnancy often is exerted by work in certain factories. As such the writer mentions factories in which extensive use is made of mercury, mercury preparations, phosphorus, arsenic, sulphur, copper, chrom, zinc, brass, mangan, baryum, lead, etc., chemical factories in which the employees inhale irritating or poisonous vapors, resin, tar, etc., especially distilleries and tobacco factories.

Of a distinctly harmful character is the effect of steady employment

in the textile industry. Much less dangerous is the occupation in a trade which permits life in the open air. The following table is given of the average weight of children born by 2,054 working women: Housewives, 3100 grams; farm work, 3093 grams; servants, 3040 grams; private work, 3039 grams; factory work, 2929 grams.

It can be said that exhausting work, especially if combined with trade poisoning, deprives the pregnant mother of a certain amount of vitality which is essential for the proper development of the fetus in the uterus.

THE CRUSADE AGAINST CANCER OF THE UTERUS.—W. A. Milligan (*Jour. of Obst. of Brit. Emp.* Jan. 1907.)—The paper is a review of the work that has been done in different countries in an effort to ensure earlier diagnosis and more prompt treatment of uterine cancer. Winter, of Koenigsberg, must be regarded as the pioneer in this movement. In 1891 he published a paper dealing with the early diagnosis of cancer. Since this time numerous articles have appeared from his pen dealing with the question of cancer in all its aspects. The most important contributions in this problem are his monograph on the crusade against uterine cancer and his paper on the result of this propaganda. In the latter he describes how he issued in December, 1902, to every doctor in East Prussia, a pamphlet, urging them, among other things, to make an internal examination in all suspicious cases. To midwives he sent a leaflet pointing out the symptoms of uterine cancer, and urging them to send on to their doctors all patients who presented any such symptoms. In addition to this he published in the most popular lay newspapers, "A Word of Advice to Womankind," in which the significance of irregular hemorrhages, etc., was insisted upon. The test of the effect of his appeal he based upon two points, viz., (1) the time which elapsed between the patient's first knowledge of cancer symptoms and her seeking medical advice; (2) the time which elapsed from the moment advice was given to the date when it was acted upon. On both these points he found a very marked improvement. The percentage of cases suitable for operation as the result of this appeal had risen to 74 per cent in 1903, against 62 per cent in 1902. Similar efforts have been made in Germany also by Duehrssen. The Austrian Cancer Committee prepared and distributed to all medical practitioners in Austria a pamphlet, entitled "*Principiis obsta.*" No practical steps in this direction so far have been taken in England. This, in spite of the fact that Lewers in a preliminary note to his book on "Cancer of the Uterus" (1902) suggests that something of a practical nature might be done in the way of making women themselves familiar with the early symptoms of uterine cancer. In America active steps were first taken at the Meeting of the International Congress of Arts and Sciences, held in St. Louis, 1904. (The report of the Committee on Cancer of the Uterus appointed by the A. M. A., in the meantime, has appeared in the *Jour. A. M. A.* Dec. 8, 1906. The chairman of the Committee, Dr. John C. Clark recommended that a copy of this report be sent to every member of every county medical society in America.—Editor.) Nothing has been done so far in France. A great deal of activity has been shown quite recently in Switzerland in promoting the crusade against uterine cancer. Three leaflets, directed respec-

tively to physicians, midwives and the lay public have been issued by the obstetrical and gynecological society of that country. The leaflet addressed to the public was sent to all the daily newspapers of Switzerland, in some of which it was published. In Sweden a commission has been appointed to begin active work in this crusade. (To the knowledge of the Editor, similar steps have been taken in Belgium and pamphlets have already been issued in Italy.)

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

RELATION OF CHOREA WITH TUBERCULOSIS.—Toutain (*These de Paris*, 1906), found that lumbar puncture showed a lymphocytosis five times in the seven cases of chorea in which he examined the cerebro-spinal fluid. According to the author this find would indicate that the organism had been invaded by some intoxication or some infection. In a certain proportion of the cases this infection is rheumatism. In others there is found scarlet fever, measles, whooping cough or tuberculosis. In one observation the choreic syndrome was produced by tubercular granulations disseminated on the pia mater in the neighborhood of the motor zone. In other cases small granulations developed along the vessels in the neighborhood of the fissure of Rolando. Various hypotheses are offered in explanation by the author.

THE DIAGNOSIS OF LATE HEREDITARY SYPHILIS IN THE SCHOOLCHILD.—Saxe (*Arch. of Ped.* Dec., 1906), found only twelve cases in which hereditary syphilis could be diagnosticated from the presumptive evidence of physical signs, among 2,500 New York school children examined. The children ranged from six to sixteen years and about equal numbers of boys and girls were studied. The heredo-syphilitic children ranged from six to fourteen years of age; five were boys and seven girls; all save one were deficient mentally; eight children showed Hutchinson's teeth; four showed the remains of syphilitic eye lesions and one showed an active keratitis. Three of twelve cases had hydrocephalic heads. All showed retarded physical development, and seven of the total number showed associated rickety changes in the bones. Nine showed scars about the mouth; all had enlarged glands; two had lesions of the nose. No throat lesions were found. Chorea was present in two cases. It would appear from this investigation that heredo-syphilis is not a very common affection in school children, though it must be looked for by the school examiner.

LOBAR PNEUMONIA AS A COMPLICATION OF DIPHTHERIA.—Rolleston (*Brit. Jour. of Chil. Dis.*, Dec. 1906), in a series of 1,000 cases of diphtheria, found lobar pneumonia in only seven cases (0.7 per cent.) He

says that the characteristics of lobar pneumonia as a complication of diphtheria may be summarized under the following four heads:

- (1.) Lobar Pneumonia as a complication of diphtheria is a rare event.
- (2.) It is not, like broncho-pneumonia, the special appanage of laryngeal cases.
- (3.) It occurs only in children.
- (4.) It resembles the primary lobar pneumonia of children in being atypical in the following respects: Absence of expectoration and of marked respiratory trouble, in an occasionally remittent or even intermittent pyrexia, in the frequent occurrence of lysis, in its relative benignity, and absence of any sequelæ except empyema.

A CLINICAL STUDY OF RELAPSES IN TYPHOID FEVER OF CHILDREN.—As the result of their study of a series of cases, Koplik and Heiman (*Arch. of Ped.*, Jan. 1907), reached the following conclusions:

Relapses in typhoid fever are more common in children than in adults—about 15 per cent. in the former. The mortality is exceedingly low. The usual duration of a relapse in a child is from one to two weeks. As a rule the temperature is continuously high between a rapid rise at the onset and a rapid fall to normal at the termination of the relapse. A constant symptom, in addition to the prolonged temperature elevation, is enlargement of the spleen; roseola is present in about 75 per cent., leukopenia in about 60 per cent., and mild abdominal symptoms in about 50 per cent. of relapses in children. Complications in these cases are mild and infrequent. For the prediction of a relapse no reliable signs are furnished by the character of the interpyrexial period nor by the course, duration and severity of the original attack. Persistent enlargement of the spleen after defervescence occurs in a fair proportion of relapse cases; and a relapse following a mild primary illness is not as likely to be repeated as one occurring after a severe original attack.

ACIDIFIED MILK IN INFANT FEEDING.—Morse and Bowditch (*Arch. of Ped.*, Dec. 1906), reached the following conclusions, as the result of an extended experimental and clinical study:

Buttermilk, buttermilk mixtures and milk mixtures acidified with lactic acid bacteria are safe foods for infants, whether well or ill. Infants can thrive and gain on them for considerable periods of time. The use of a routine buttermilk mixture, as has been the custom in the past, is not as rational as that of an acidified milk mixture modified to suit the individual case or of buttermilk modified by the addition of cream and milk sugar. The preparation of such acidified mixtures, while not difficult, is not very practicable for private work. These mixtures and buttermilk are almost always taken well. The results obtained from acidified milk mixtures in cases of malnutrition and chronic disorders of digestion are not materially different from those obtained from the use of other preparations of milk of the same percentages. They are, however, worthy of trial in cases of intractable disturbances of digestion, because some cases do much better on them than on other forms of modified milk. Practically the same, and in some instances better, results are obtained in these conditions with pasteurized buttermilk as with acidified milk mix-

tures. This fact suggests strongly that the good results which are obtained with buttermilk mixtures are due to their low fat content in combination with a large amount of proteid in an easily digestible form, and not to the acidity or to the action of the bacteria. Pasteurized buttermilk gives very good results when given as the first form of milk food after the initial periods of water and starchy diets in acute intestinal indigestion and infectious diarrhea. It is possible that unpasteurized buttermilk will give even better results because of the action of the lactic acid bacteria on the intestinal flora. Fat free milk acidified with pure cultures of lactic acid bacteria ought, however, to be safer and more reliable than commercial buttermilk.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

SOME RARE DISTURBANCES IN BASEDOW'S DISEASE.—Mosse (*Berl. klin. Woch.*, No. 1, 1907.)—This is an account of three rare complications found in Basedow's disease which can be considered as a part of its possible symptomatology. The first of these is the presence of right-sided Graefe sign with a right-ptosis. The second is the presence of marked Basedow symptoms with a thyroid gland that is not enlarged. Senator has called attention to the fact that the size of the gland and the severity of the symptoms have nothing to do with each other, or rather no necessary relation.

This brings up the question, though it is not mentioned specifically in this paper, that the enlargement of the thyroid gland may be, in part, only a secondary effect of the abnormal content of the thyroid secretion. That is, it is more the nature of this secretion than its quantity that establishes the abnormal condition. The third point mentioned is the presence of glycosuria in this disease. The author mentions two cases with this peculiarity and describes one case in detail. The urine in this case contained 0.4 per cent.

TUMOR OF THE SPINAL CORD LEADING TO DESTRUCTION OF THE LUMBAR REGION, HYDROCEPHALUS, DOUBLE OPTIC NEURITIS AND PAINLESS LABOR.—E. W. Taylor (*Boston Medical & Surg. J.*, No. 6, 1907.)—This is one of the most suggestive cases of cord tumor that has appeared recently. It is also abstracted in this department to illustrate a carefully reported clinical case. The summary of the case is as follows: In September a pregnant young woman was suddenly seized with radiating pains down both legs. The pain increased and walking became difficult on account of the pain. The urine was at first under control. Later the pain extended to the bladder and rectal regions, and in the latter part of December difficulty in micturition supervened, necessitating the occasional use of a catheter. Beginning mental disorder appeared at this time; pain extended into the back; beginning paralysis of the legs; stand-

ing alone impossible; urine passed with extreme difficulty; sensory disturbances in the legs developed; loss of power in the legs rapidly supervened together with loss of reflexes. Increase in mental confusion, disorientation as to time and place, extreme constipation and complete urinary incontinence. Thereafter, headache, much restlessness and discomfort, stiffness of the neck, and sensitiveness on moving the head; increasing headache, beginning optic neuritis going on later to complete blindness. In the beginning of January a painless labor, giving birth to a healthy child. Pricking sensation in the arms, but without paralysis. In February persistence of complete transverse lesion of the cord with no faradic response in the muscles of the legs. Very marked mental disturbance with final loss of the power of speech and increasing apathy. Death six months from the onset of the first pain. Post mortem: Extensive tumor of the spinal cord, destructive in the lumbar region, associated with internal hydrocephalus. The interesting point of this case is the occurrence of optic neuritis in spinal cord tumors. In tumors of the lower segments of the spinal cord optic neuritis is practically unknown, but in this case the tumor invaded the cervical cord. The optic neuritis was due to an internal hydrocephalus which was occasioned by a practical occlusion of the spinal canal by the tumor. This led to a blocking back of the cerebrospinal fluid, normally finding egress from the brain into the subdural spaces of the cord.

CRISES OF PETIT MAL WITH A PARAMNESIC AURA: ILLUSION OF FALSE MEMORY.—Seglas (*Rev. Neurologique*, Jan. 15, 1907.) An interesting account of a case in which the aura consisted of false memory. It is of importance to remember that this phenomenon may constitute an important phase of an epilepsy which for a long time escapes notice. The case in its epileptic feature is as follows: At certain moments, suddenly the patient is under the impression that he has been in the same surroundings before. As familiar as the surroundings seem to be and as well known the people and things, in this circumstance he is unable to reproduce them in the waking state. The attack itself, of which this is only the aura, is sufficiently typical of a petit mal to need no attention in this abstract. The point of interest in such cases is that for a time the aura itself can constitute the main part of the attack, or replace it entirely as the case may be. Before deciding upon the significance of this phenomenon it is well to seek for other indications of epilepsy, as for example the existence of minor seizures such as were present in this case.

A CONTRIBUTION TO THE KNOWLEDGE OF THE SO-CALLED MYOHYPOTONIA OR MYATONIA CONGENITA.—Bernhardt (*Neurologisches Centralbl.*, No. 1, 1907.)—Notices concerning this disease have appeared in this department from time to time. The last was a contribution from Spiller, who had an opportunity of studying the post mortem appearance of a case of this disease. He came to the conclusion that the primary change was in the muscle substance itself and that the central nervous system as such as not involved. The disease was first described by Oppenheim who called attention to the existence of a peculiar condition met with in infants and very young children, in whom the muscular

system presented a most marked degree of hypotonia together with absence of very minus reflexes. To this condition he gave the name of myatonia congenita. Bernhardt's analyses, the published cases so far appearing in the literature as well as the few post mortem studies, and advances the idea that this disease is nothing more than an infantile form of multiple neuritis. He describes three cases of his own in which the diagnosis of multiple neuritis was made. He shows that they differ only in minor details from the published cases of the myatonia congenita. Spiller's cases are open to the criticism that some of the symptoms found were not characteristic of the typical myatonia as described by Oppenheim. The position taken by the author is worthy of considerable attention because it offers a reasonable explanation of cases which in a class itself complicates, unnecessarily perhaps, the whole subject of peripheral pareses.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

A DISCUSSION ON AFFECTIONS OF THE LACHRYMAL PASSAGES.—OSBORNE (*Brit. Med. Jour.* Dec. 29, 1906) states that a simple obstruction of the lachrymal passages does not produce constant epiphora and that constant epiphora may exist where the lachrymal canals are perfectly normal.

Risley, considering the anatomic conditions giving rise to obstruction, says that when the cause of epiphora lies in the puncta or canaliculi gentle dilatation after cocainization is usually sufficient to effect a cure.

When the sac is inflamed, a preliminary slitting of the canaliculus, followed by the injection of cocain-adrenalin, will contract the swollen tissue so that fluids will pass into the nose without the necessity of probing the nasal duct. When fluids can be made to pass, the inflammation of the sac and nasal duct will rapidly subside without probing.

Purulent affections are treated with astringents after cleansing with a solution of peroxide of hydrogen; many are managed without probing.

When probing is necessary, the soft tissues are shrunk as much as possible and B. 3 or 4 is cautiously passed to the floor of the nose and left *in situ* twenty minutes. Attention is called to the necessity of treating the nose in the region of the turbinates.

Theobald advocates the use of his large probes.

Weeks deals with obstruction due to thickening of the lining membrane due to cicatrices. He uses gold styles, either solid or plated. The diameter of style should be about one mm. less than the diameter of probe passed. A temporary style of 3-4 American gauge lead wire is made to conform to the individual requirements. With this as a model a permanent style of 18K. gold wire is made by the surgeon. It should be removed every 3-7 days, and the passages irrigated. Complications and accidents are dragging the inner canthus downward, irri-

tation of the eyeball, displacement of style, concretions, absorption and perforation of the horizontal plate of upper maxilla, cutting through the wall of canaliculus by weight of style and formation of granulation tissue.

Results: Permanent recovery in from two to nine months. Recurrences are not common.

THE TREATMENT OF GONOCOCCIC CONJUNCTIVITIS WITH SPECIAL REFERENCE TO THE SILVER SALTS.—DE SCHWEINITZ (*Ther. Gazette*, January 15, 1907).—The most satisfactory irrigating fluid is boric acid. Potassium permanganate 1-2000 to 1-5000 by continuous irrigation after the method of Kalt, three or four times a day, is also useful. Cold, by chilled pads is recommended for adults in the early stages, provided the cornea is intact and the patient is robust. For the relief of chemosis, De Schweinitz advocates radial incisions with a Graefe knife through the entire depth of the swollen tissues. He believes in the superiority of silver nitrate in 2 per cent solution over organic silver salts. It must be painted on to the everted lids, after cleansing of pus, and the pellicle formed by the silver washed away by sodium chloride solution. After the lids are replaced, the sack is irrigated and iced compresses are applied for five or ten minutes.

Derby has proved that argyrol forms a precipitate in the presence of albumin and urine, and that its bactericidal power is exceedingly weak. Nevertheless, clinically, argyrol is of value in that it diffuses itself, penetrating all the crevices of the inflamed conjunctiva which it coats, thus floating pus and mucous to the surface, from which it can be readily removed by mild irrigation.

ON THE SECONDARY INSERTION OF THE RECTI MUSCLES AND THEIR CLINICAL IMPORTANCE.—HOWE (*Brit. Med. Jour.*, Dec. 29, 1906).—The supporting fibres of connective tissues passing from the muscles to the globe constitute the secondary insertions of the extraocular muscles. In common with many other muscles of the body, the ocular muscles have their insertions strengthened by tendinous bands. Max Virchow, in a vertical section of the globe near the insertion of the recti muscles has shown that these fibres extend from the edge of each muscle toward the adjacent muscles. These small fibres are, clinically, of great importance, as they must be divided in order that a tenotomy may be complete.

BINOCULAR VISION.—A. FREELAND FERGUS (*Brit. Med. Jour.*, Dec. 29, 1906), describes the use of plastograms, or stereoscopic pictures, the one printed in red and the other in green, in testing a patient's consciousness of perspective.

It is often difficult to ascertain whether a person really has a sense of the third dimension. All doubt on the matter can easily be dispelled by asking the patient to sway himself slowly from side to side while examining a plastogram. Anyone with fully developed binocular vision will find that the objects in the foreground appear to move in the same direction as he moves. As he closes one eye the apparent movement at once ceases, for the condition of its being present is that both eyes shall be used simultaneously.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. LAUER, M. D.

THROAT DISEASES CAUSED BY THE MISUSE OF THE VOICE.—VAN BAGGAN (*Med. Record*, Jan. 5, 1907).—The author states that the throat troubles of clergymen, orators, professional speakers and singers are nearly always due to a misuse of the voice. The principal symptoms of which the patient complains, are a dry and hot feeling in the pharynx and larynx, irritation, and a frequent cough, especially after speaking or singing. Examination shows a catarrhal condition of the pharynx and larynx with congested and swollen mucosa; the pillars of the fauces are swollen and often highly developed. There is usually a paresis of some of the laryngeal muscles, and always a paresis of the vocal cords which are red, or yellow in color, and which do not close well. Observing these patients while speaking, or singing, we shall see that they do not use their breathing, articulation and vocal muscles normally; the faulty breathing fails to support the vocal muscles sufficiently for the proper vibration of the vocal cords. According to the author the fault is purely functional, and the proper treatment of such cases is to teach the patient to breathe properly, the combined diaphragmatic and costal breathing being considered the best; and to have him learn to control his breath, and articulate properly. The speaker should be warned not to take singing lessons to improve his voice. No exercises are to be undertaken until the patient has gone through a judicious medical treatment united with rest to the organ.

THE RADICAL OPERATION FOR EMPYEMA OF THE ANTRUM OF HIGHMORE.—RETHI (*N. Y. Med. Jour.*, Feb. 9, 1907).—The technique of Rethi's operation is as follows: First of all he paints with a cocaine-adrenalin solution the lower concha inside and outside, and the external nasal wall of the lower and middle nasal meatus. The operation is nearly entirely painless, and it is seldom necessary to again use the cocaine during the operation. The lower concha is then loosened from its insertion in its outer two-thirds with one or two clippings of the scissors, and dissected in its inner one-third with a conchotome, or curved scissors. The external wall is opened with a chisel through pressure of the hand, and the edges of the opening so formed are to be made even on all sides, not only upwards but also downwards, that is toward the external wall of the lower as well as of the middle nasal meatus, so that a broad opening of communication is formed between the maxillary antrum and the nose. A sharp retroflected spoon is used immediately after opening and if a deeper inflammation is suspected, the walls are carefully examined and everything scraped that looks suspicious.

About a quarter of an hour is required for the entire proceeding, while the operation proper takes about five minutes. The antrum is washed out daily until the pus becomes less; then, less frequently.

The author has used this operation in 38 cases, with a cure of 32 cases, and attributes his success to the large opening which his operation gives, seldom, if ever, requiring a second operation.

SOME MENTAL SYMPTOMS DUE TO DISEASE OF NASAL ACCESSORY SINUSES.—STUCKY (*Lancet-Clinic*, Jan., 1907).—In support of the belief that a great many mental disturbances are due to acute or chronic disease of the accessory nasal sinuses, the author reports a number of cases of accessory sinus disease marked by depression bordering on insanity, that were cured and restored to a normal mental condition after undergoing an operation upon the sinuses which relieved the condition found there. The cases reported were all of the chronic suppurative variety, and practically the same operation (Killian) was performed in each case; always followed by a relief of the psychoses.

The presence of pus, or granulations in the sinuses is not necessary to produce marked toxic symptoms with pain and mental depression. In some of the cases reported, no pus was suspected and none found, but as soon as the obstructing middle turbinate was removed, the relief was immediate.

The etiology of the condition, according to the author and other authorities, depends on the anatomic relation of the middle turbinates to the hiatus semilunaris and infundibulum. The air in the frontal and anterior ethmoidal cells is imprisoned there by pressure of the middle turbinates against the lateral wall of the nose, the turgescient tissues filling in the hiatus and effectually blocking it. The lining membrane absorbs the oxygen from the air, creating a vacuum; negative pressure results and consequent swelling of the lining membrane with increased blood supply to this region. Stasis results and pressure of the congested tissues on the contained nerve-endings produces the symptoms, and results in reflex vaso-motor disturbances in the circulation of the neighboring tissues.

OPTIC NEURITIS IN THROMBOSIS OF THE CRANIAL SINUSES AND INTERNAL JUGULAR VEIN.—LANGWORTHY (*Laryngoscope*, Jan., 1907).—Reviewed twenty-six cases of thrombosis of the cranial sinuses and internal jugular vein. He found that in only 30 per cent of the cases was there an occurrence of optic neuritis; in nearly three-fourths of the cases the diagnosis had to be made without any demonstrable ocular changes. The finding of an optic neuritis in only 30 per cent of the cases was a matter of some surprise to the author, as many of the cases were extremely severe with a lethal termination. The author says that ordinary marked papillitis is followed by post neuritic atrophy; but in the optic neuritis met with in thrombosis of the lateral sinuses and internal jugular vein, the reverse seems to hold good. Almost without exception the neuritis subsides and the disc soon regains its normal appearance with excellent vision.

A case is reported of a boy eight years of age, who was admitted to the Massachusetts Charitable Eye and Ear Infirmary, November 5, 1904, with a right acute otitis media with mastoiditis plus extra-dural abscess. A few days later he developed thrombosis of the lateral sinus and internal jugular vein. Mastoid operation and ligation of internal jugular vein was performed. Examination of the fundi revealed a double optic neuritis with hemorrhages into the retina. A month later the

optic neuritis was seen to be rapidly diminishing. Hemorrhages remain, although less distinct.

Two years later the fundi were normal in appearance with good vision. No contraction of the visual fields. The author states that an optic neuritis should not be considered as present in these cases unless it is well marked. Hyperemia of the disc is not a neuritis. He concludes: 1. That the frequency of optic neuritis is low—about 30 per cent. 2. That even the most severe type of optic neuritis is not followed by post-neuritic atrophy, but rapidly subsides with preservation of good vision. 3. That cases in which the fundi are negative throughout the acute attack, remain so. 4. That for optic neuritis to be considered due to the disease, it must be well marked, and that optic neuritis when it does occur is a symptom of the highest importance.

MEDICAL LAW AND MEDICAL JURISPRUDENCE.

IN CHARGE OF

IRVIN V. BARTH, LL. B.

OPINIONS OF NON-PROFESSIONAL WITNESSES AS TO MENTAL CONDITION.—Wightman vs. Grand Lodge A. O. U. W. of Missouri (*St. Louis Court of Appeals*, Dec. 11, 1906), 98 S. W. 829:

In an action upon a benefit certificate the mental condition of him upon whose life the certificate was issued became a material issue. To prove his alleged insanity certain lay witnesses were permitted to testify and in sustaining the action of the trial court the St. Louis Court of Appeals held:

"These witnesses stated the facts upon which they based their opinions of Wightman's mental condition, and while their opinions may not be entitled to the same weight, and may possess less probative force than would the opinions of professional men on the facts related by the witnesses, yet their opinions were competent evidence to go to the jury for what they were worth."

NOTE: Since the case of *Baldwin vs. The State*, 12 Mo. 223, decided in 1848, the Courts of Missouri have held to the doctrine that opinions of non-professional witnesses as to mental condition are admissible in evidence. Here it has been held, however, that accompanying his opinion the witness must recite the facts upon which he bases his conclusion. "The value of such opinion depends wholly upon the opportunity the witness had to observe the conduct of the person whose mind is in question and upon the incidents actually observed. These circumstances should be stated, first, to make the opinion competent as evidence; and, second, to enable the jury to estimate the value of the opinion. Indeed, a non-professional witness may relate the facts without expressing any opinion at all, leaving it to the jury to draw the conclusion with or without the aid of experts."

But it must be noted also that in *State vs. Soper*, (1899) 148 Mo. 217, the Supreme Court of Missouri, departed from the doctrine which requires the lay witness to give the facts on which he founds his opinion concerning the mental condition of a person in a case wherein the witness gave expression to an opinion that the person observed was sane. "In that case," the Court held, "the subject of the testimony would not give manifestations of certain eccentricities which usually mark the conduct of mind diseased."

Though Missouri is in line with most of the States in admitting the testimony of non-professional witnesses, concerning sanity or insanity, there is much authority to the contrary. In New York the earlier decisions rejected such evidence entirely but there have been upheld since then certain refined distinctions so that at the present time in that State much is left to the discretion of the trial court in admitting or excluding that class of testimony. A recent writer in commenting upon the division of authority in this matter pertinently observed: "To a large extent the action of the tribunals of a given State is determined by their opinion as to the probative value of 'expert testimony,' properly so called. To Courts which regard expert testimony or scientific subjects as of exceptional value it is a controlling consideration that the subject of insanity is one of a technical nature, that the popular standard of insanity is not the same as the legal standard, and that special training is needed to appreciate the significance of the facts presented in evidence, while the inference of an observer is frequently colored by his prejudices. Courts whose opinion fails to recognize any special value in expert evidence generally naturally fail to recognize any in this connection. They are impressed with the circumstance that the facts in their entirety frequently elude statement, and that therefore the expert cannot have a complete and accurate basis for his judgment; that many witnesses can make a correct inference easier than they can make a detailed description, that as commonly presented to observation insanity is readily detected, if carried beyond a certain point and that to reject the inference of an observer with suitable opportunities and faculty for observation is to refuse to consider evidence which is frequently of the highest possible value."

And it is here interesting to observe the views of the Supreme Court of Missouri on this question of "expert testimony" expressed in the year 1898, in the case of *State vs. Soper*, *supra*:

"It belongs to the Court to give the law applicable to the jury, whether that bears on the science of medical jurisprudence or not. Therefore, the Court was entirely right in refusing to let counsel for defendant read as a part of their argument to the jury the writings of eminent physicians. The Court had it within its discretion to grant such permission; it could not be demanded as a matter of right. And in concluding this paragraph, I cannot refrain from saying, what many others in similar conditions have said, that Courts as the years go by, place a lessening reliance on the value of expert testimony in relation to the subject of insanity. Indeed, on this bench for a long period of years, we have had murder cases coming

up from the largest city of this State and wherever and whenever a distinguished expert and author on insanity was called on the witness stand, he invariably made out the defendant to be insane."

EXPERT TESTIMONY AS TO CAUSE OF DEATH FOUNDED SOLELY ON KNOWLEDGE DERIVED FROM STUDY.—*Rice vs. State*, (*Court of Criminal Appeals of Texas*, 1906), 94 S. W. 1024.—Appellant was convicted of murder in the first degree and his punishment assessed at a life imprisonment. The indictment charged him with the murder of his wife, the allegation as to the cause of death being the administration of strychnine from a fountain syringe into the rectum. Evidence was introduced by the State tending to support this allegation.

To sustain its case the State introduced two physicians to give their opinion as experts concerning the cause of death, both of whom attributed it to strychnine poison. In qualifying these witnesses, it developed that neither had ever before in the course of his practice seen a case of strychnine poison, though both were medical graduates and had practiced a number of years. Their knowledge concerning strychnine poison had been acquired solely from reading the books and study, and from what they had been taught in school. Objection was made that these witnesses could not be considered as experts and, consequently, their testimony was inadmissible.

The Court in passing upon this point said:

"The authorities on this subject appear to hold the rule thus:

'A witness may be competent to testify as an expert, although he has had no practical experience in the subject of inquiry, but had derived his knowledge and information solely from study and reading of books dealing with the subject under investigation.' Under the rule laid down by these authorities, the testimony was admissible.
* * * * * A man may become an expert from his knowledge of the human system and from his knowledge of strychnine as a poison, without having ever attended a case of poison by strychnine. A man may become an expert from scientific investigation without any practical experience."

NOTE: The doctrine of the principal case is in accord with the decided weight of authority. In every field of human activity where the testimony of an expert may be required he may be qualified as such either (1) by reason of a professional, scientific or technical training, or (2) by practical experience in the subject matter of his testimony, which gives to him an especial knowledge not shared in by men in general. Where a witness is shown to have both qualifications, his testimony, of course, is entitled to be given greater weight by the jury, but the absence of one of these does not as a matter of law render him incompetent to testify as an expert. In any event, the question of competency is for the trial judge to determine and in fixing the standard of qualification he is given by the law a large discretion, not arbitrary, of course, but founded upon sound reason depending in great part upon the nature of the subject matter as to which the testimony is offered.

The Supreme Court of the State of Missouri, in the case of *Helfenstein vs. Medart*, (1896) 136 Mo. 595, announced the doctrine of the principal case as applied to the testimony of a mechanical engineer when that Court quoted with approval the following:

"A witness, otherwise qualified, may express an opinion on a matter pertaining to his special calling or profession, although his knowledge of that particular matter has been derived from study rather than from actual experience. It is the doctrine of the Courts that study of a matter without practical experience in regard to it may qualify a witness as an expert."

Similarly, the case of *Fischer vs. Packing & Provision Co.*, (1898) 77 Mo. App. 108. And with reference to a medical expert the case of *State vs. White*, (1882) 76 Mo. 96.

Interesting questions, suggested by the principal case, have arisen in many jurisdictions concerning the testimony of experts after a chemical analysis of stomach contents for the purpose of discovering the presence of poison. It has been held that physicians may testify "to a chemical analysis made by them of the stomach of the deceased, and to the tests applied for detecting the existence of poison," though they were not professional chemists and had no experience in the analysis of poison. But such testimony, though competent, has not the weight of credibility as the testimony of an expert shown to be a practical chemist, whose conclusions are based not only upon study but upon experience as well. And it was further held in the case of *State vs. Cook*, 17 Kan., 392, that a person who is a chemist and toxicologist might testify as an expert concerning the effect of strychnine upon the human system, although he may not be a physician or surgeon.

SOCIETY PROCEEDINGS.

ST. LOUIS SURGICAL SOCIETY.

Meeting of December 8, 1906.

Dr. Arthur Tracy Cabot read a paper entitled "A Contribution to the Study of Hydronephrosis," for which see page 277.

DISCUSSION.

Dr. Mudd said no mention had been made of the differential diagnosis between hydronephrosis and certain other forms of tumor of the kidney. In this connection he mentioned a case in which the x-ray was a great factor in establishing the diagnosis. A malignant tumor was thought of very strongly. An x-ray picture showed the tumor extending practically to the median line, but the light penetrated the tumor very readily, making the diagnosis pretty clear between a solid tumor and hydronephrosis. He believed the x-ray would be an important factor in the differential diagnosis of these tumors.

Dr. Carson said that most of these cases when seen by the surgeon have nothing but the shell of the kidney remaining, and therefore he believed the best thing to do was to perform nephrectomy. He mentioned a case operated on by him which he did not believe could have been relieved by catheterization, if the obstruction had been simple kinking of the ureter, for it would have recurred, even if it had been dilated. The ureter stood high up on the ventral surface; the pelvis came off from its lower border. The obstruction was due to a cicatrix which had formed in the ureter.

In regard to traumatic hydronephrosis he mentioned a case in which both kidneys were involved. At the post mortem, instead of finding a hydronephrosis he found a cyst around each kidney.

Dr. Cabot, in closing, said he had seen a good many cases which he felt sure were cases of hydronephrosis in which an operation did not seem warranted. These he treated by manipulation and posture, by raising the hips, thus assisting the pelvis of the kidney to overcome the condition temporarily, which afforded relief. He would not use this method of correcting the ureter by inserting a bougie in place of operating on a valve if a valve could be discovered, but in the cases reported he had been driven to the method because he was unable to locate any special point of obstruction. In cases where it is difficult to locate the point of obstruction, straightening the canal by the bougie may be of service. In the cases operated upon the attachment of the kidney to rib is an important part of the operation in order to insure the permanency of the result.

BOOK REVIEWS.

E. MERCK'S ANNUAL REPORTS. Complete Series. Vol. XIX., 1905. Darmstadt, May, 1906.

This useful report on the "advancements of pharmaceutical chemistry and therapeutics" offers in a convenient form the experience of a multitude of observers with the various preparations discussed. The form is in general that of an encyclopædia, the various drugs being arranged more or less in alphabetical order, with a brief discussion of the pharmaceuticals and therapeutics of each. The more recent German synthetic preparations receive the lion's share of space, but a few of the pharmacopœal drugs are also discussed, and not the least interesting portion is the discussion of recent advances in histologic staining methods. The little volume will be found useful to every internist.

AN INTRODUCTION TO PHARMACOGNOSY. By Smith Ely Jelliffe, Ph. D., M. D., Professor of Pharmacognosy, and Instructor in Materia Medica and Therapeutics in the Columbia University (College of Physicians and Surgeons), New York. Octavo volume of 256 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company. Cloth, \$2.50 net.

The special emphasis placed on the microscopic characteristic of drugs makes this book of inestimable value for those attempting to do original work in pharmacognosy. The fine description of the microscopical characteristics of drugs makes also an excellent aid in a practical study of pharmacognosy, which would be of great value to every pharmacist, as well as others interested in the scientific identification and structural anatomy of drugs. The source, the microscopic appearances, the chemistry, and the adulteration of each drug is also given—all of these important factors are essential to practical pharmacists, and of much interest to therapeutists.

ESSENTIALS OF MATERIA MEDICA. THERAPEUTICS AND PRESCRIPTION WRITING. By Henry Morris, M. D., College of Physicians, Philadelphia, Seventh Edition, thoroughly revised by W. A. Bastedo, Ph. G., M. D., Instructor in Materia Medica and Pharmacology at the Columbia University (College of Physicians and Surgeons) New York City, 12 mo, 300 pages. Philadelphia and London: W. B. Saunders & Company. Cloth, \$1.00 net.

This book is no exception to the high class of compends of the excellent series issued by W. B. Saunders & Company. It should fulfill the demand for an up-to-date synopsis on Materia Medica, Therapeutics and Prescription Writing of the present day. Dr. Bastedo has included in this work the newer remedies, their indication and therapeutic uses.

ORGANO-THERAPY, OR TREATMENT BY MEANS OF PREPARATIONS OF VARIOUS ORGANS. By H. Battui Shaw, M. D., Lecturer in Therapeutics, University College, London, Assistant Physician to University College Hospital and to the Hospital for Consumption and Diseases of the Chest, Brompton, 12mo., 250 pages. W. T. Keener & Co., Chicago. Price, \$1.75 net.

This scientific volume based upon research work of past years covers the entire field of organo therapy. The actual worth of the book is evidenced by the exact application of the facts of physiology, physico-chemistry and histology, which it accepts as a basis. It serves a very important purpose of summarizing the complete work of the past in this line, and it endeavors to establish a scientific basis, and the indications for this form of therapy.

A TEXT BOOK OF MECHANO-THERAPY. By Alex. Grafstrom, B. SC., M. D. Late Lieutenant in the Royal Swedish Army, Late House Physician of City Hospital, New York, Attending Physician to the Gustavus Adolphus Orphanage, Jamestown, N. Y., 12mo., 190 pages. Philadelphia and London: W. B. Saunders & Company.

This work is prepared especially for medical students, trained nurses, and medical gymnasts, and can be recommended as a text book or a guide to those who wish to make this therapy a specialty.

PRACTICE OF MEDICINE. By Hughes Dayton, M. D., Principal to the class in Medicine, New York Hospital, Out-Patient Department, Clinical Assistant in Medicine, Vanderbilt Clinic, College of Physicians and Surgeons, Columbia University. Edited by Victor Cox Peterson, A. M., M. D., Instructor in Surgery and Anaesthetis and Instructor in Anaesthesia at the New York Polyclinic Medical School and Hospital; Genito-Urinary Surgeon to the Out-Patient Departments of the New York and the Hudson Street Hospitals. 12mo. 316 pages. Philadelphia and New York: Lea Brothers & Company.

As a hasty reference for the busy practitioner as well as the student this volume bears out the previous excellent reputation of the medical epitome series of which it is a part. The addition in the inclusion of the chapter on immunity of the rare infectious diseases is not treated in the older text book and brings this compend up-to-date.

ATLAS AND TEXT BOOK OF HUMAN ANATOMY. Volume II. By Professor J. Sobotta, of Wurzburg. Edited, with additions, by J. Playfair McMurrich, A. M., Ph. D., Professor of Anatomy at the University of Michigan, Ann Arbor. Quarto volume of 194 pages, containing 214 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$6.00 net; half morocco, \$7.00 net.

This volume is a direct continuation of the first. It equals the first in the beauty of its illustrations and the accuracy and detail which is evidenced throughout. It treats of the viscera and of the heart. The mode of reproduction of dissections is identical with that employed in the first volume. K. Hajek has produced all the illustrations except two. They are multi-colored lithographs, with explanatory figures, and diagrams explaining the plates. Neither effort nor expense has been spared to insure the greatest excellence of the illustrations.

PLASTER OF PARIS AND HOW TO USE IT. By Martin W. Ware, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor in Surgery, N. Y. Post Graduate Medical School. 12mo.; 72 illustrations, about 100 pages. Surgery Publishing Co., 92 William St., New York City. Cloth \$1.00.

The general demand for information and instruction on the question of the making and application of plaster of Paris bandages is great enough to require the publication of such a book as this. The author describes in explicit detail the many uses to which plaster of Paris is adaptable in surgery. He also takes up its uses in dental surgery. The book makes a very attractive little volume, and contains definite, useful information.

THE TOXINS AND VENOMS AND THEIR ANTIBODIES. By Em. Pozzi-Escot. Authorized Translation by Alfred I. Cohn, 12mo., vii. + 101 pp. New York, John Wiley & Sons, 1906.

A brief and very interesting presentation of modern views concerning toxins and antitoxins. The first half of the book is devoted to general considerations and the-

ories, the second to a more detailed description of animal, vegetable and microbial toxins. The concluding chapter on the venoms is one of the most interesting. The translation is smooth and adequate, but the proof-reading is open to improvement. An index would add to the value of the book.

PHYSICAL CHEMISTRY IN THE SERVICE OF MEDICINE. Seven Addresses by Dr. Wolfgang Pauli. Authorized Translation by Martin H. Fischer. 12mo.; pp. ix. + 156. New York, John Wiley & Sons, 1907.

A knowledge of physical chemistry is becoming more and more essential to all who wish to keep abreast of the new physiology and the finer methods of laboratory diagnosis. As yet, such knowledge is woefully lacking among nearly all but a few advanced workers in this field; many attempts at original research serve but to reveal the writer's ignorance of fundamentals. Dr. Pauli of Vienna in this little volume has presented clearly and concisely those aspects of physical chemistry that particularly concern medicine. The chapters on the colloidal state and the electrical charge of protein are of especial interest. This volume, too, suffers from the lack of an index.

CARBONIC ACID IN MEDICINE. By Achilles Rose, M. D. Large, 12mo, cloth, 268 pages, price \$1.00 net. Funk & Wagnalls Company, New York.

Although carbonic acid has been recognized for centuries as a therapeutic agent, it has fallen into disuse. Achilles Rose in this entertaining volume demonstrates the worth of this therapeutical agent and illustrates from personal experience and clinical records its healing qualities and many indications.

PRACTICAL MASSAGE IN TWENTY LESSONS. By Hartvig Nissen, Instructor and Lecturer in Massage and Gymnastics at Harvard University Summer School. Director of Physical Training, Brooklyn Public Schools. Author of Swedish Movement and Massage Treatment, A. B. C. of Swedish Education, Gymnastics, Rational Home Gymnastics, etc. 46 Original Illustrations, 168 pages, 12mo. Price, extra cloth, \$1.00 net. F. A. Davis Company, publishers, 1914-16 Cherry St., Philadelphia.

This very practical treatise on massage offers to the profession concise and reliable information regarding this very important and misused therapy. The practical illustrations of all methods, the definite and exact indications as well as the positive counter-indications presented in his little work should be of great value to every medical man.

PRACTICAL DIETETICS WITH REFERENCE TO DIET AND DISEASE. By Alida Frances Pattee, Special Lecturer at Bellevue, Mount Sinai, Hahnemann, and the Flower Hospital Training Schools for Nurses, New York City. Fourth Edition, 12mo., 311 pages. A. E. Pattee, New York.

This very exhaustive work, besides giving the author's own practical message in the preparation, application and indications of diet, includes the best thought from all other authorities in this most important means of therapeutics. The concise and exact information make it an excellent reference, and it is a book of inestimable value to physicians, nurses, and hospitals.

DOSE BOOK AND MANUAL OF PRESCRIPTION WRITING. By E. G. Thornton, M. D., Ph. G., Assistant Professor Materia Medica, Jefferson Medical College of Philadelphia. Third edition revised and enlarged, 12mo., 392 pages. Philadelphia and London: W. B. Saunders & Company.

This book is a very convenient ready reference for both pharmacists and physicians.

PULMONARY TUBERCULOSIS: ITS MODERN AND SPECIALIZED TREATMENT. By Albert Philip Francine, A. M. Harv. M. D. U. of P. of the Staff of the Henry Phipps Institute, Philadelphia, Examining Physician to the White Haven Sanitorium, Instructor in Medicine and Physician to the Medical Dispensary of the University of Pennsylvania. 12mo., 247 pages. J. B. Lippincott Company, Philadelphia.

This very interesting work is one of the most up-to-date treatises on this subject extant at the present time. It gives a complete treatment of tuberculosis, with detailed application of all the modern methods. It includes a brief account of methods of study and treatment of tuberculosis at Phipps Institute.

RATIONAL ORGANO-THERAPY. By Prof. Dr. a. von Poehl, Prof. Dr. Prince J. von Tarchanoff, Dr. Alf. von Poehl, Dr. P. Wachs. Translated by Dr. Carl Schulin, Billings, Mont. Octavo Volume of 230 pages. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut street.

Based upon scientific research, the authors of this work lay special stress upon the action of the active principles isolated from organs as suggested by Prof. von Poehl. They bring forth by means of clinical demonstration a great variety of new indications, especially for spermin, and show its far reaching effect on those disease processes upon which this former therapy had not been tried in the past.

A PRACTICAL TREATISE OF MATERIA MEDICA AND THERAPEUTICS WITH ESPECIAL REFERENCE TO THE CLINICAL APPLICATION OF DRUGS. By John V. Shoemaker, M. D., LL. D., Professor of Materia Medica, Therapeutics and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia Physician to the Medico-Chirurgical Hospital, Fellow of the Medical Society of London, etc., Sixth edition. Thoroughly revised. Octavo volume, 1255 pages. F. A. Davis Company, Philadelphia,

This revised edition of Shoemaker's *Materia Medica and Therapeutics* requires no special recommendation. The previous editions have been perfected, thus making the present edition a standard text book of this country.

TEXT BOOK OF PHYSIOLOGY NORMAL AND PATHOLOGICAL. By Winfield S. Hall, Ph. D., M. D. (Leipzig), Professor of Physiology, Northwestern University Medical School, Chicago, Member of the American Physiological Society, Chairman of the Section of Pathology and Physiology, American Medical Association, 1904-5, Fellow of the American Academy of Medicine, Member of the American Association for the Advancement of Science, etc. Second edition revised and enlarged, illustrated with 340 engravings, three colored plates. Octavo volume, 772 pages. Lea Bros. & Company, Philadelphia and New York.

The revision of this standard text has made it more practical and useful to the student, the physician and the investigator by the addition to each chapter of the Pathological Physiology concerned with that system. This addition of the practical application of physiology enhances the value exceedingly both as a text and reference.

INDIKATIONEN UND KONTRAINDIKATIONEN DES HOCHGEBIRGES. Von Dr. F. Jessen, Wurzbürger Abhandlungen, Vol. VI., No. 12. Wurzburg, A. Stuber's Verlag (Curt Kabitzsch), 1906.

The writer attempts to show the utility of high altitudes in a multitude of affections. The anemias and the various tuberculous disorders are especially benefited.

On the other hand, leucemia and most rheumatic disorders are often injured. As regards cardiac disease, while a high altitude is often injurious, selected cases do very well.

OPERATIVE SURGERY. By Joseph D. Bryant, M. D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Woman's Hospital, and Manhattan State Hospital for the Insane. etc. In two 8vo volumes. 1302 pages. 1576 illustrations, 90 of which are in color. Sold by subscription. Price, cloth, \$10.00. D. Appleton & Co., 436 Fifth Avenue, New York.

This representative American work is probably the largest of its kind in existence. There are quite a number of one-volume works on operative surgery in English and German, while the French literature possesses a two-volume work of about two-thirds the size of Bryant's. We can be proud of this third edition, since it can be truthfully affirmed that quality has kept pace with quantity and the two volumes as now presented mark the epoch. The entire work has been revised and rewritten since it became so large as to necessitate a division into two volumes. The number of illustrations have been continually increased as the work has grown in size, until now 1793 of them are presented. Many of them are excellent, although it cannot be claimed that all of them represent the highest achievement of the engraver's art. One point, which the reviewer must criticize, is the author's habit of giving a page now and then to the illustration of the various instruments which are useful in this or that surgical procedure. This seems wholly unnecessary, and indeed involves repetition in most instances. It must be said that an excellent editorial supervision has been exercised in most instances where a choice of useful procedures, rather than all of which have been proposed on a certain subject, are given for the reader's edification. Now and then points of clinical value are added to the pure technical description of this or that operation. In the first volume one finds general considerations regarding anaesthesia, a sepsis, etc., while the treatment of the various tissues as such is also considered. In volume two, as might be expected, special organs and regions are treated. Withal, the work is probably the best thing of its kind extant.

SURGERY, ITS PRINCIPLES AND PRACTICE. By Various Authors. Edited by W. Williams Keen, M. D., LL. D., Philadelphia and London. W. B. Saunders Company. 1906.

Herewith is presented the first volume of what is intended to be the most extensive work on surgery that has ever appeared in the English language. Nor is its extent all that it will have to recommend it. Each chapter will be edited by an eminent authority.

Such names as Bevan, Binnie, Codman, Crile, Cushing, Finney, Frazier, Kocher, Lennander, Matas, Mayo, Mumford, Murphy, Ochsner, Robson and a host of others equally as well known being embraced among the contributors to it.

The first of the five volumes has just appeared and leaves little to be desired with regard to style, illustration and general quality. It commences with the history of surgery and reviews the various subjects which can be treated generally.

It is not Dr. Keen's intention in this, or any other succeeding volume, to present what he terms "surgical novelties." The editors do, however, hope to give the reader the very latest knowledge which is of proven worth.

The other four volumes are apparently ready, as Dr. Keen states that they will appear as soon as they can be printed. The value of such a work cannot be questioned. In most of our smaller volumes on surgery, one man, together with his associates and assistants, is responsible for the whole volume; here, however, every chapter being written by an author of recognized ability in his own especial line of work, the quality of the book must be high. The galaxy of

authors here represented can certainly not be equaled by any other selection made in America.

SURGICAL DIAGNOSIS. A manual for students and practitioners, by Albert A. Berg, M. D. Lea Bros. & Company, New York and Philadelphia, 1905.

This volume, of a kind which is most needful to every surgeon, is possessed of 236 illustrations, of which many are original and others carefully chosen from the best works on surgery. There has been a general complaint that surgical diagnosis is poorly represented in our medical libraries. In fact, more volumes have been published upon all of the other branches of surgical science than upon this one.

The work before us is comparatively of small size, its pages numbering 543, but within its scope it embraces practically everything which the beginning surgeon will find necessary. The author comments upon the fact that improved surgical technique has brought the internal organs within the operator's field of work, consequently improvements in diagnosis were necessitated thereby. He gives due credit to explorative operations in general, but recognizes the fact that it is far more agreeable to the patient, where a diagnosis is possible without such a procedure. The diagnosis of disturbances in kidney functions receives due consideration and practically all of the newer surgical fields are fully considered. X-ray plates elucidate many traumatic lesions.

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